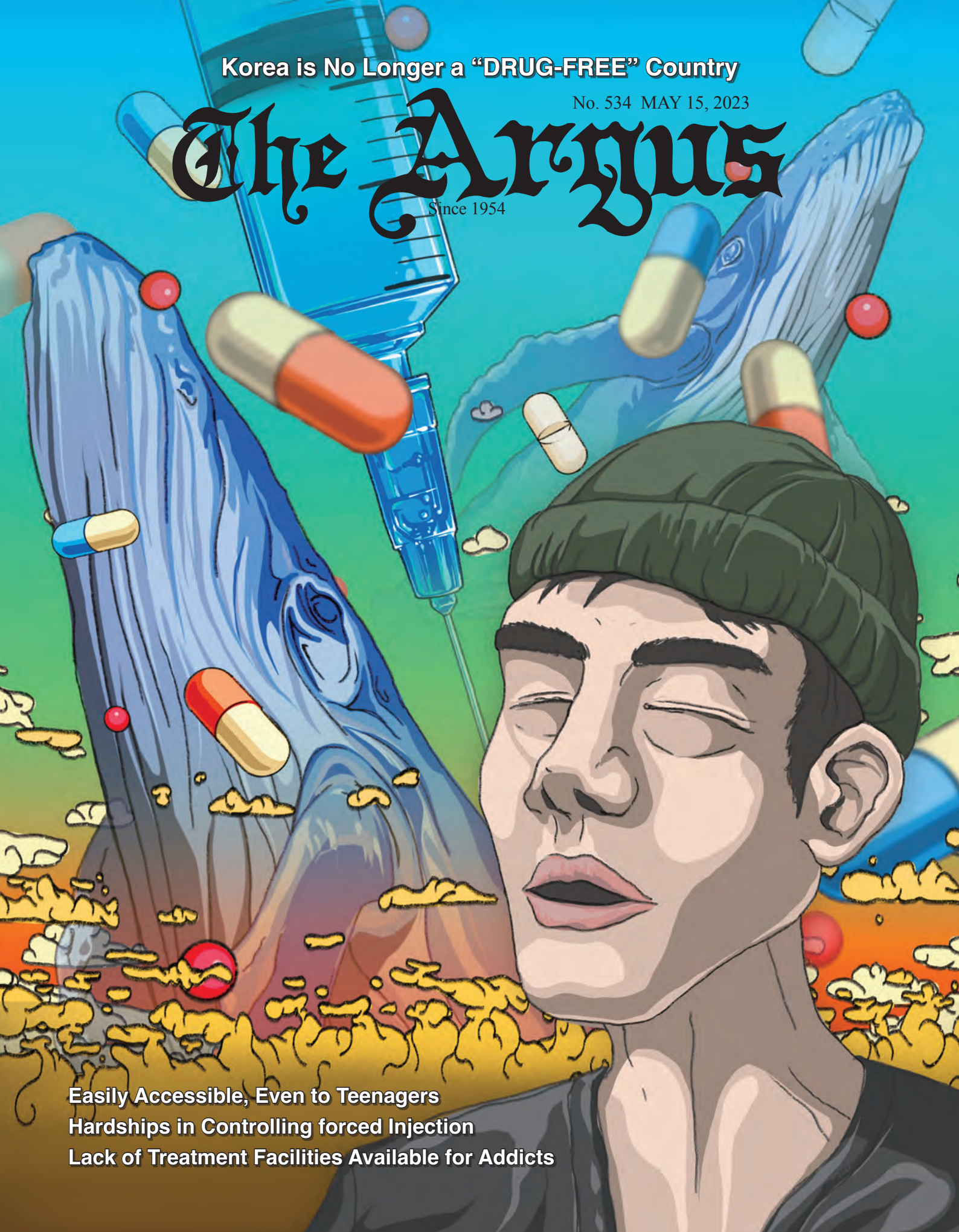


Korea is No Longer a “DRUG-FREE” Country

No. 534 MAY 15, 2023

The Argus

Since 1954



Easily Accessible, Even to Teenagers
Hardships in Controlling forced Injection
Lack of Treatment Facilities Available for Addicts

Published monthly except on school holidays by and for the students of Hankuk University of Foreign Studies, The Argus, the campus English magazine in Korea, pursues the highest standard of campus journalism and academism.

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Editorial

A Deadly Shadow of Drug Abuse

Prohibition has benefits. We do not have to think twice. We do not have to be curious because it is prohibited. We all know why it is prohibited, and we do not need to experience it firsthand to understand it. There is no need to jump off a building to find what will happen. It is the same with “drugs.” In the past, when drugs were not known to be harmful, people believed that they were a panacea. However, in the 21st century, we are aware that drugs damage our brains and lead to addiction. Some say that drugs provide temporary happiness, but we all know that is a lie. Some also say that a single use is harmless, but we also know this is untrue, and that one first step is the biggest. We all know this, but we fail to resist temptation driven by an impulse.

Mistaken impulses seem to be running the world. Kensington Street in Philadelphia, United States, is known to be crowded by drug addicts. YouTube videos show that people are injecting themselves with drugs in the middle of the road while the police are watching. People are walking like zombies intoxicated with all kinds of drugs. Unfortunately, this is not just about Philadelphia. On April 3, 2023, a crime occurred in Daechi-dong, the center of Korean private education in Seoul. Six students and one parent were drugged against their will, deceived by the lie that the drink would enhance concentration. Korea, which was once called a drug-free country, no longer safe. The entire world is struggling with drugs.

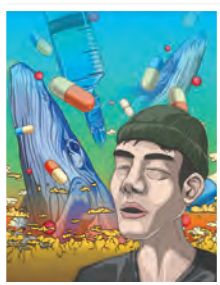
Some may dismiss the issue, saying, “The drug issue again?” But this attitude will not solve the problem, and it may even make it worse. We need to confront the problem and not underestimate its seriousness. We must use our curiosity wisely to understand what is happening, what the reasons are, and what we should do. Reporter Kim Jun-hong of the social section is analyzing the severe ongoing problem of drug problems in Korea, trying to identify its causes and solutions. The reporter’s passion even led her to contact those undergoing rehabilitation. The Argus wants to inform readers that we understand life can be challenging, and that you may seek a quick and easy way out of such challenge. However, we urge you not to use this as an excuse to engage in criminal behavior, which will neither protect nor rescue you. The Argus hopes readers will keep in mind of the risks and gravity of drug abuse around us and take steps to safeguard themselves. 

By Cho Eun
Editor-in-Chief

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Cover Story

>> Drug issues have become a serious social problem that can no longer be ignored. South Korea's drug offenders are at an all-time high. In particular, as illegal drug transactions through social media and various apps become easier, young people under 30, more exposed to such environments, are easily obtaining drugs. Drug crime continues at this very moment, so it is necessary to be aware of it in order to eradicate it. No one is safe from drugs because everyone can be exposed to them even if they do not want to. That is why young people, who are vulnerable to drug abuse, should be aware of the dangers of drugs. Let's investigate drug issues in South Korea and make sure to stay alert.

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GS TESOL's Upcoming Admissions, Chance to Grow as English Professional

From May 15 to 29, 2023, HUFS Graduate School of TESOL (GS TESOL) will be accepting applications for general admission. GS TESOL was established to train English language educators in line with increasing globalization and information exchange and aims to educate graduate students to be competent in TESOL instruction, administrative decision-making, and content development. All classes are taught in English and held from 6:30 p.m. to 9:40 p.m., with two classes per day every two to three days each week. There are two departments: English Language Teaching and ELT Materials & Technology.

Applicants must apply online and submit documents from May 15 to 29, 2023. Applicants should fill out the online application form and submit other required documents to the school office. The required documents are: the Application Form, Study Plan, one copy of the college diploma (or proof of prospective graduation) and an official transcript, Certificate of Employment (if applicable) and TESOL certificate and transcripts (if applicable). Interviews are scheduled on June 10, 2023, and must be attended in person. However, applicants who are overseas, or have difficulty traveling due to COVID-19, can apply for a video interview. Further information about admission requirements, tuition policy, and the curriculum, can be found on the GS TESOL website (<http://tesolgs.hufs.ac.kr>).

Cho Ha-young (Ingenium College of Convergence Studies '22) said, "As a student majoring in English Interpretation and Translation, it will be a great opportunity to learn English professionally beyond college classes. I am interested in the Multimedia-assisted language learning class in the curriculum, which will cover subtitle editing." If being interested in pursuing a career in teaching English, consider applying to GS TESOL, which provides in-depth training and a unique learning experience. 📖

By Park Gyeong-jin

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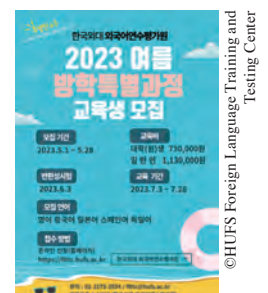


▲ GS TESOL provides guidelines for applicants on its website.

Learn New Language, Have A Meaningful Summer

HUFS Foreign Language Training and Testing Center is looking for participants for the summer vacation special courses. This 80-hour language course runs from July 3 to July 28 during the summer vacation and aims to help the participants improve practical language skills. English, Chinese, Japanese, Spanish, and German courses are open and before the beginning of the course, a placement test is conducted in order to customize the class according to each student's level. In the case of English courses, speaking, listening, and writing classes are offered and for other languages, grammar and conversation classes are held together.

It is noteworthy that undergraduate students of HUFS can accrue credits for foreign language courses, or even receive a foreign language certification after the completion of this course. The application period is from May 1 to May 28. Park Su-min (Department of English for International Conferences and Communication '21) said, "It seems like a great merit in that students can learn a foreign language in a relatively short amount of time. Chances to learn a language other than English can also act as a great opportunity, and help students manage time effectively during the vacation." Those who want to learn a foreign language joyfully during the vacation period should not hesitate to apply for the summer vacation special course. 📖



▲ Specific information about the course can be found on the website of the Foreign Language Training and Testing Center.

By Kim Jun-hong

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The Department of English Education Holds First Alumni Meeting

At 7 p.m. on March 20, 2023, Peter Pak, an alumnus of the English Education Department, gave a speech at the first alumni meeting of the Department of English Education. The event was titled “My Way, My Life” and was held in room 307 of the Humanities Building. It was hosted by the HUFS English Education Department and Professor Lee Kil-young, Head of the English Education Department. About 30 students of the English Education Department participated in the meeting. Speaker Peter Pak has been a journalist since graduating from HUFS and is now working as a special planning director at The Korea Times Los Angeles. The speech consisted of a simple self-introduction, stories from his undergraduate days, life as a journalist, personal values, and questions and answers.

In his speech, Alumnus Pak mentioned that as an undergraduate, students should gain a lot of experience at HUFS and that it is good to make a habit of taking a note. In addition, Pak emphasized the importance of doing what one wants to do and living a life without regrets, even if it leads to failure. Through this event, Pak gave advice to the students of the English Education Department so that they can have a more meaningful experience in college and be more prepared for their future. In the Q&A session, Pak encouraged the students by giving books to those who asked questions. 📖



©Ryu Hyo-rin/The Argus

▲ Alumnus Pak giving meaningful piece of advice to the students of English Education Department.

By Ryu Hyo-rin
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HUFS GTEP Joins Overseas Exhibition

HUFS Global Trade Experts Incubating Program (GTEP) participated in the “Suwon Mega Show 2023” held at the Suwon Convention Center from March 30 to April 2. The show is the largest consumer goods fair in South Korea where foreign buyers and distribution workers join for product sourcing. Aiming to cultivate global youth trade experts, the 17th GTEP collaborated with “Micell Korea Lab,” a cosmetics manufacturing company. Students of GTEP transacted intermediate sales as sales brokers and analyzed foreign buyers’ needs in order to lead to purchases. GTEP also participated in the “2023 Seoul Coffee Expo” and the “5th Korea Beer Expo,” held at the COEX in Seoul on April 8.

This May, GTEP plans to join “Taipex 2023,” one of Thailand’s largest ASEAN B2B food exhibitions. The exhibition deals with food products, catering services, and franchise businesses. For other overseas exhibitions, GTEP will participate in the Shanghai Beauty Exhibition, the Kazakhstan Beauty Expo, and Tokyo Beauty World. Lim Se-jin (Department of Greek Studies and Bulgarian Studies ‘19), who participated in the 2023 Seoul Coffee Expo, said: “It was a meaningful time because I could meet face-to-face with domestic and overseas buyers. Also, I had various practical experiences that I could not learn from theory alone. Representing HUFS, I and other GTEP students will continue to join various exhibitions, so please stay connected to see our next activities!” 📖



©hufsgtep

▲ Students of the 17th GTEP participating in the 2023 Seoul Coffee Expo held at the COEX in Seoul.

By Kim Su-yeon
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News Briefing


By Cho Eun
Editor-in-Chief

The First U.S. President in Court




▲ Donald Trump, the former President of the U.S., appearing in a Manhattan court.

On April 4, 2023, former President Donald Trump appeared in a Manhattan court on 34 charges related to sexual misconduct allegations. He is the first U.S. president to appear in court. He replied “not guilty” for all 34 charges, but prosecutors believe Trump manipulated corporate documents to provide hush money to three people regarding his sex scandal. Alvin Bragg, the New York County District Attorney, stated: “These are felony crimes in New York State, no matter who you are.”

Trump, a former president and a leading candidate for the next 2024 presidential election, claimed about the indictment: “This fake case was brought only to interfere with the upcoming 2024 election, and it should be dropped immediately.” In a poll conducted by CNN, 60 percent of respondents supported Trump’s indictment, while 76 percent said the political situation affected the prosecution’s decision to indict him. In fact, the protests for and against the indictment took place near the Manhattan court. As a result, Trump’s approval rating in the Republican Party is on the rise. If this situation continues, it is predicted that the 2024 U.S. presidential election will be more chaotic than the 2020 presidential election. 

Finland Joins NATO

Finland became the 31st official member of the North Atlantic Treaty Organization (NATO) on April 4, 2023. For the past 70 years, Finland has been a neutral country. However, it joined the military alliance after Russia’s invasion of Ukraine. “The era of military non-alignment in our history has come to an end. A new era begins,” declared Finnish President Sauli Niinisto.

As Finland, which shares a border with Russia, has become a member of an adversarial military organization, Russia declared a military response, including deploying tactical nuclear weapons in Belarus as a corresponding measure. Furthermore, the Belarusian president insisted that strategic nuclear weapons be deployed if necessary. Russia’s invasion of Ukraine began in the name of security risks from NATO’s eastward movement, but it ultimately led to Finland’s accession to NATO, doubling the border between Russia and NATO members. Against this backdrop, Sweden, a neutral country for 200 years, is also seeking to join NATO this year due to security concerns. 



▲ Finland, colored in sky and located next to Russia on the map, joins NATO.

China Surrounding Taiwan



▲ Tsai Ing-wen(L), the Taiwanese President, meeting with Kevin McCarthy(R), the House Speaker of the U.S.

©KNEWS MEDIA

On April 8, 2023, China conducted a military drill, surrounding Taiwan with a sudden announcement of the drill from April 8 to 10. On the first day, China dispatched 71 military aircrafts and nine warships around Taiwan, which is an unusually large number. This appears to be a countermove for the visit of Taiwanese President, Tsai Ing-wen, to the United States on March 29, 2023, where she met with House Speaker Kevin McCarthy. In August 2022, China also demonstrated its opposition to the U.S. with a siege-style military exercise when House Speaker Nancy Pelosi visited Taiwan. Unlike last year, the April training was relatively mild without live fire. But experts say that this may be a more detailed exercise that has taken a step forward from last year's training.

The reason for China's sensitivity can be found in the "One China" policy. According to this policy, Taiwan is a part of China, not an independent country. China argues that the U.S. diplomacy with Taiwan is an infringement of sovereignty, treating Taiwan as an independent country. However, the U.S. views the continuing smooth relations with Taiwan as an issue that China cannot intervene in. 

Xi Jinping Greets Macron in China

Xi Jinping, the General Secretary of the Chinese Communist Party, and Emmanuel Macron, French President, met twice during Macron's trip to China. On April 6, they met at the Great Hall of the People in Beijing, and once again in Songyuan, Guangzhou, on April 7. During the visit, China and France signed several economic deals worth billions of dollars. At the same time, France, along with other major European countries, continue to warn of the possibility of China's support for Russia and raise questions about human rights in China.

These countries are showing a twofold attitude toward China. EU Commission President Ursula von der Leyen stated about EU-China relations on March 3, 2023, at European Policy Center: "How China continues to interact with Putin's war will be a determining factor for EU-China relations going forward." Von der Leye observed, however, "I believe it is neither viable nor in Europe's interest to decouple from China." Europe claims that it should take the position of a mediator in the Ukrainian war and conflicts in relations between the U.S. and China. The EU has deep economic ties with China, which ranks second in the proportion of EU exports and first in imports at 23 percent. China's friendly relations with Europe can confirm that China seeks to avoid isolation from the international community amid its strife with the U.S. 



▲ Xi Jinping(R), the General Secretary of PRC, and Macron(L), the French President, are shaking hands.


©Ludovic Marini/
AFP via Getty Images

The Unsolved Problem Between South Korea and Japan




▲ POSCO, KORAIL, KEPCO, KEC are the Korean companies named to compensate.

On March 6, 2023, the South Korean (hereafter Korean) government proposed a solution to the issue of compensation for damages caused by the forced mobilization, which has been a problem in diplomatic relations between South Korea and Japan over the past few years. Forced mobilization refers to the forced labor of the Korean victims taken to Japan during the colonial era. In response, the Korean court ruled in 2018 that Japanese companies should compensate the victims, and Japan protested. Since then, the present government has tried to resolve the conflict between Korea and Japan.

The Korean government concluded that victims must be compensated, but has designated a Korean company to pay the compensation, not a Japanese company. The victims were able to opt to receive the amount of compensation from the company based on the 1965 Korean-Japan Claims Agreement. However, all three surviving victims opposed the government's solution. Despite the victims' opposition, the government made the decision because the solidarity with Japan in the security and economic sectors is necessary. 

The First Acknowledgment and Win for a Vietnam War Victim

A victim of a massacre of civilians during the Vietnam War (1955~1975), in which the Korean army participated as a combatant, won a lawsuit against the Korean government on February 7, 2023. Nguyen Thi Thanh, survivor of the civilian massacre in the Vietnamese town of Phong Nhi, filed the first lawsuit against the Korean government for damages.

The government did not acknowledge the alleged massacre in the Vietnam War and appealed the ruling. The court ruled that the Korean government should acknowledge and compensate based on the testimony of the victims and Korean soldiers who had participated in the war. The attorney for Nguyen Thi Thanh also said in an interview with JTBC: "The Korean court's judgment has demonstrated that Korea is different from Japan in historical issues." The Korean government at the time also dealt with past historical issues and war crimes related to Japan through the legal system. The National Assembly also introduced a bill on February 23, 2023, to investigate the massacre of civilians. The Vietnamese government expressed regret over the Korean government's decision to appeal, saying, "We hope the Korean government respects history." 



▲ The National Assembly introduces a bill to investigate the massacre of civilians.

Moral Dilemma of Poverty Pornography

By Lee Ju-won

Associate Editor of Culture Section

“For only \$30 per month, you can help this child suffering from a rare disease.” This fundraising phrase can be seen on TV or internet websites. Also, the photos which zoom in on the eyes of a skinny child and young parents holding a child struggling in hunger exemplify the typical fundraising advertisement. It is made to help children in need, but ethical problems that violate their human rights arise because their lives are exaggerated to raise money. These advertisements are sometimes called poverty pornography. Is it really genuine assistance to evoke sympathy by indiscriminately displaying children’s faces, sadness, and anguish? The Argus will discuss the dilemma of poverty pornography with five HUFS students, hoping all the children of the world will be happy every moment.

Before Reading

Poverty Pornography: Also called “poverty porn,” it refers to contents such as writing, photo, and video with the aim of attracting fundraising and sympathizing for the poor. The concept was first used in 1981 when Danish human rights activist Jorgen Lissner criticized the use of starving child images in advertisements.

What Is a Good Example of a Fundraising Advertisement?

The Norwegian Students’ and Academics’ International Assistance Fund (SAIH), which is a non-governmental organization (NGO), selected the best and worst fundraising advertisements in 2017.

The Best: “War Child Holland and ‘Batman’”

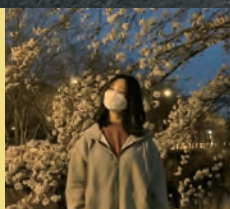
In a slum with a hopeful song playing and bright sunshine gleaming, the superhero character “Batman” holds his hands out to carry a heavy water bottle for a boy. He then carries the child on his shoulders, kicks the ball or arm wrestles with him like a friend. Every scene from the delighted child’s point of view implies that children in troubled regions can have dreams while laughing like everyone else. At the end of the video, the phrase “For some children, fantasy is the only way to escape reality,” highlights the message of the advertisement.

The Worst: “Ed Sheeran Meets a Boy Who Lives on the Street”

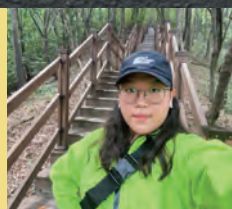
In the dark night, a young boy sleeps on a beach in an abandoned boat filled with trash. He said he lost his family because of the Ebola virus,* and Ed Sheeran, a famous singer, is looking at him with compassion. Between the scenes, the singer explains this unfortunate reality and urges fundraising, saying, “They need your help.” At the end of the video, the website address for fundraising is repeatedly shown. This is a typical form of fundraising advertising.

*Ebola virus: The virus spread rapidly around Guinea in Africa in 2014. About 9,000 people were infected and half of them died within six months.

Interviewees



Shin Dong-youn
Division of African Studies '19



Lee Jeong-yoon
Ingenium College of Convergence
Studies '20



Yun Bo-na
Division of African Studies '21



Ahn Na-yeong
School of English for Interpretation
and Translation '22



Doh Jung-hyun
Department of Russian '23

The Argus: What was the poverty pornography scene you saw? What did you think of it?

Doh Jung-hyun (Doh): I saw malnourished children with bloated stomachs eating porridge. Even though not everyone in that country is poor, only specifically chosen images of poverty were shown.

Yun Bo-na (Yun): The photo of a famous “white” American celebrity holding a “dark-skinned” child may send out a misleading message that only “white” people can help them. Some may even say that this image resorts to the so-called “racial guilt” to encourage donation.

Ahn Na-yeong (Ahn): When I watch fundraising advertisements, I often see a listless child lying down, because it is too difficult to treat her in her present environment. It makes me wonder if poverty pornography only deals with problems, because I have never seen a solution or a positive result of sponsorship. Is this actually helpful for the children?

Shin Dong-youn (Shin): I had a critical response after seeing poverty pornography about low-income people in South Korea. The story was that a grandfather was taking care of his grandchild and that the child would be helpless and without any support if his grandfather passed away. The child’s privacy was invaded and exploited as a part of the advertisement.

Lee Jeong-yoon (Lee): Seeing a child walk tens of kilometers to get water broke my heart. It made me want to help the child carry the water at the time. However, now I feel uncomfortable thinking that this story was somewhat exaggerated.

The Argus: What are the positive or negative effects of poverty pornography?

Doh: I think poverty pornography is the most efficient way to raise money. It is a method to imprint a donor’s memories through saturation advertising. However, in the process of mass-producing advertisements, it is problematic to portray the target aid recipients as passive and dependent. They are portrayed as being unable to do anything without support. If people with the help of sponsors see such advertisements, they may think of sponsors as hypocrites.

Yun: Poverty pornography is as strong yet fleeting as any other kinds of pornography. Poverty pornography can collect donations, but it prevents long-term sponsorship by cementing the image of the region or country. The fixed image makes it difficult to know the structural causes of the problem and gives the bias of “a poor country from the beginning.” As time passes, the fundamental reasons for sponsorship will also be lost.

Ahn: I took a class about international refugees. Before taking the class, I knew that refugees would flee to lots of places with minimal luggage due to war. However, there are not only cases like that. There are many other cases such as those opposing a certain political system, those leaving their homeland for political reasons. As I encountered only refugees suffering from war or disaster through poverty pornography, I adopted this stereotype involuntarily.

Shin: The main targets of poverty pornography are children who are socially disadvantaged. It may infringe upon human rights by revealing their real names and faces or actual residence. However, revealing this information exposes social issues and the crises faced on the other side of the world.

The Argus: All interviewees answered that poverty pornography could generate a lot of funding although it caused ethical problems. Which comes first; ethical issues or fundraising? Do you think humans can meet halfway?

Yun: The hypothesis that fundraising is difficult without poverty porn is unconvincing. In 2021, some fundraisers at NGOs discussed the topic “Between human rights and fundraising: the dilemma of poverty pornography.” Three out of four people said there was a big difference in the collection between typical poverty pornography and content deemed not to fall within this category. Meanwhile, the other NGO representative had a different opinion. She said the amount of money did not decrease when highlighting the self-reliance and capacity of recipients, and that focusing on the growth of these recipients in advertisements is not entirely impossible.

Ahn: An ethical solution to the problem of poverty pornography requires that we try to understand the problem in terms of cognitive empathy. The book “The Radius of Empathy” (2022) written by Jang Dae-ik describes two thinking systems. System I is an emotional and intuitive system that acts unconsciously and immediately, and is very efficient in urgent situations. System II

is an entertaining and reasonable thinking system that requires actuating force and concentration in the prefrontal cortex of the brain; it is relatively accurate, but has a long reaction time. In other words, emotional empathy evokes feelings of sorrow, fear, and joy while cognitive empathy is the ability to understand others. Even if it takes time, I believe that looking at poverty pornography through cognitive empathy will solve ethical problems.

Shin: Ethical issues are important, but it is also essential to solve social problems immediately. Therefore, I think it is okay as long as a clear agreement from the person subject to the fundraising advertisement is secured. When producing these advertisements for children, there are some cases where the child is too young to voice their personal opinions or provide sufficient explanations. This should never happen. In one case, a father who committed domestic violence returned after seeing an advertisement and took all the donations. The child might have agreed to be filmed, but it is necessary to examine who actually agreed to the portrait rights on behalf of the child.

The Argus: Provide specific examples and outlooks for fundraising advertising.


Doh: In order to create a mature philanthropic culture, consideration must be taken and members of society should sympathize with each other. Fundraising advertisements also need to inspire the thought that sponsors and recipients are not very different. Therefore, it would be good if a buddy program is introduced. Schools or individuals can host campaigns to hang out with those in need of support and make friends. Scenes of happy faces going to school or playing will lead people to share their precious time.

Yun: A good fundraising advertisement reveals the structural causes of a given problem. For example, instead of shedding light on children who have lost their homes due to the climate crisis, advertisements should show the climate crisis. NGO World Vision produced an advertisement under the theme of “When we have a forest.” Rather than provoking sympathy from sponsors, it shows the change in the community that received the fundraising.

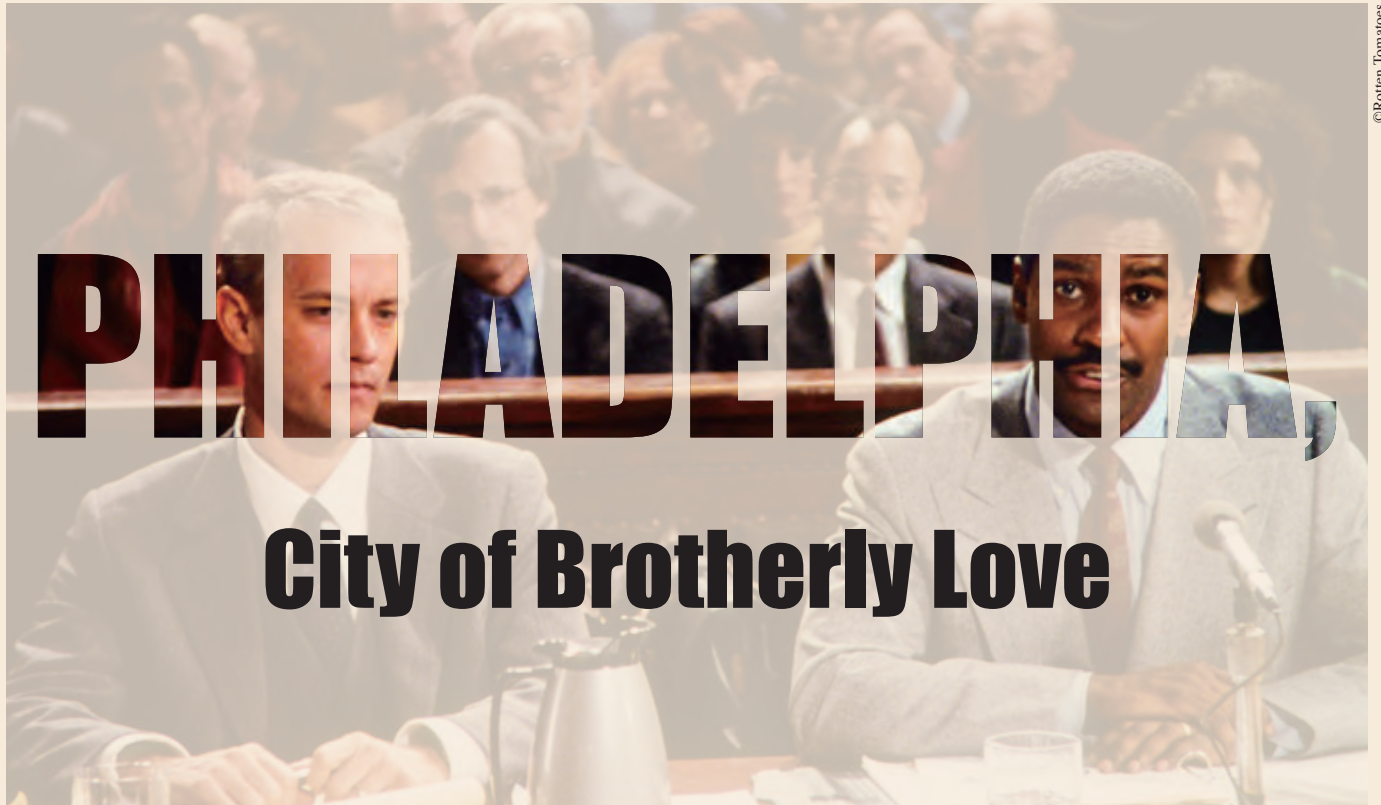
Ahn: In September 2015, the photo of a 3-year-old Syrian refugee child buried in the sand on a Turkish beach was released. The refugee child, who had been washed up by the sea, sent a powerful message that people should no longer turn a blind eye to the refugee problem. It received a great response from European countries at the time, but when refugees and migrants actually entered European countries, it was opposed by many Europeans. This problem requires the creation of content that generates cognitive empathy. Content producers should be aware of the reality in the long term and seek to address fundamental problems.

Shin: I suggest two ways. First, a direct focus on children in poverty should be avoided for their future. I recommend illustration instead of photography. The message must be delivered clearly but not in a disturbing manner. Second, it would be better to specifically show the environment changed by fundraising rather than the negative reality. For example, underdeveloped facilities that have been improved to become schools, or how well the money is spent each month could be featured instead.

Lee: Poverty pornography is filmed from a third-party perspective, so following the target’s point of view is better. Accordingly, legislation is needed to encourage this, especially to protect the people in the advertisement. In 2016, the Korea NGO Council for Overseas Development Cooperation (KCOC) published “Media Guidelines for the Protection of Children’s Rights.” They contain guidelines for child rights protection and checklists when taking photos, creating videos, or producing media reports, although they do not have any legal effect.

All five interviewees say that poverty pornography has to be replaced because it is clear that NGOs, advertising agencies, and sponsors are aware of the problem. Nevertheless, why is there no improvement in fundraising advertising? Citizens also need to examine their attitude, which only focuses on the poverty narratives of poor people. People already know that there are a lot of people who are suffering at this moment and that with our little concern, they are getting closer to being free of poverty. Furthermore, rather than avoiding the pain of others because it is irrelevant to us, humans should develop true respect for them. The Argus hopes that global poverty will be eradicated with all the readers’ help. 

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By Park Gyeong-jin

Staff Reporter of Culture Section

On a day like any other, someone receives an unexpected dismissal notice from their employer. It is not for absenteeism, insincerity, misappropriation, malpractice, or an employment scam. It is because of their LGBTQ* identity. Could this be a valid reason for being fired? In the movie, “Philadelphia,” Andrew is wrongfully accused and fired from the law firm where he works after being outed as a gay man with AIDS.* Andrew’s instant job loss highlights the reality of discrimination and hatred that many LGBTQ individuals face. What does society look like to LGBTQ people today? With the upcoming “International Day Against Homophobia, Transphobia and Biphobia” on May 17, The Argus aims to build a society that respects the diverse identities of its workers by exploring the discrimination and the reality faced by Andrew, a homosexual worker, at his workplace in “Philadelphia.”

*LGBTQ: LGBTQ is an abbreviation for lesbian, gay, bisexual, transgender, and queer. These terms are used to describe a person’s sexual orientation or gender identity.

*AIDS: According to Korean Centers for Disease Control and Prevention, AIDS (Acquired Immune Deficiency Syndrome) is an acquired immune deficiency that results from the destruction of immune cells responsible for the body’s defenses. One of the earliest symptoms of AIDS is the appearance of red spots.

“Philadelphia” (1993)

Directed by Jonathan Demme

Andrew, a capable lawyer, files suit against the big law firm he once worked. He claims that he was unfairly dismissed for having AIDS. The law firm fired him over an incident in which a complaint or an important document Andrew was supposed to submit disappeared into thin air. Convinced that this is all a conspiracy to fire him, Andrew searches for a counselor to defend him, only to be turned down by nine in a row. Eventually, he asks Joe, a former opposing counselor. Joe refuses the request because he cannot stand homosexuality, but after Joe witnesses Andrew being discriminated against at the library, he changes his mind. As he investigates the case, Joe realizes the irony that the hatred towards LGBTQ people pervades Philadelphia, the city that symbolizes freedom and liberation. Joe exclaims, “This trial is not about a disease. Let’s talk about what this case is really about. The general public’s hatred... our loathing, our fear of homosexuals.” While Andrew’s condition worsens, his damaged rights and honor are restored by winning the case. Finally, right after the verdict, Andrew’s life comes to an end, and those who loved him gather together to memorialize his life.



▲ “Philadelphia,” directed by Jonathan Demme and starring Tom Hanks, was released on Dec. 22, 1993.

The Significances and Limitations of “Philadelphia”

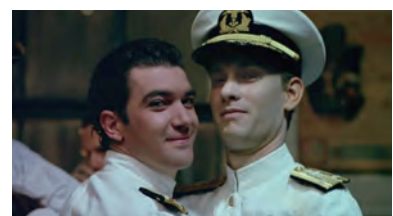


▲ Philadelphia, “The city of brotherly love,” is home to the LOVE Statue.

“We are standing in Philadelphia, the City of Brotherly Love, the birthplace of freedom, where our Founding Fathers authored the Declaration of Independence. And I do not remember that glorious document saying, ‘All straight men are created equal.’ I could have sworn it says, ‘All men are created equal.’” This is what Joe, the counselor, shouted to reporters as he and Andrew left the courthouse. “Philadelphia” is based on a true story that took place in the United States in the 1980s, and there are two reasons that Philadelphia, a city in the northeastern U.S., was chosen to be the background. First, the movie’s subject of LGBTQ human rights corresponds to the symbolism of the city of Philadelphia. On July 4, 1776, the governors representing thirteen states of the former British colony of the U.S. gathered together in Philadelphia to declare independence. To avoid repeating the history of oppression, they wrote that “all men are created equal” at the forefront, and Philadelphia, where the Declaration of Independence was issued, became a symbol of freedom and liberation. However, in the movie, Philadelphia contradicts these tenets and is portrayed as a city that does not protect Andrew’s human rights. Second, the word “Philadelphia” comes from the Greek word “Philadelphus,”

which means “brotherly love,” same-sex feelings. The last scene with the song whose lyrics include, “Philadelphia, City of Brotherly Love,” suggests that “Philadelphia” in this movie implies homosexuality. In a word, the narrative of unfair dismissal based on sexual identity in Philadelphia, a city of brotherly love that symbolizes freedom and liberation, emphasizes the subject of the movie.

“Philadelphia” is significant in that it was the first mainstream Hollywood film to feature homosexuality as a main theme. Tom Hanks, who plays Andrew, won the Academy Award for Best Actor, and the movie earned about eight times its production cost in box-office profits. However, the huge success of the movie does not mean that it depicts the struggles of homosexuals perfectly. Kim Soo-yeon, a professor of English Literature and Culture at HUFS, points out that despite the film’s homosexual theme, there is only a short love scene between the lovers, Andrew and Miguel. To avoid the rejection that comes with unfamiliarity, they do not show the physical bond and love beyond the premise that they are a good-looking “same-sex couple.” Also, professor Kim says, “The unconditional support for Andrew is in contrast to real-life families who are often in great conflict over sexual identity.” Kim adds, “The ideal family portrayed in this movie follows heteronormativity.” This can be seen with



▲ In the movie, Miguel(L) and Andrew(R) are in a relationship.



▲ Joe visits Andrew at the hospital with his wife and daughter.

are biologically incapable, as the ideal standard of happiness. It can be argued that the success of the movie is because it avoids depicting homosexuality in a way that would make discriminatory viewers feel uncomfortable.

While “Philadelphia” is significant for foregrounding the topic of unfair dismissal on the basis of sexuality, it shows the limitations of not confronting the complex problems and discrimination faced by LGBTQ people. In particular, the happy ending of the trial in the movie restoring Andrew’s rights and honor oversimplifies the complicated problems of LGBTQ communities. This may reflect contemporary U.S. society at the time and the lack of public discussion of that discrimination. Then, 30 years after the movie’s 1993 release, what are the realities facing LGBTQ people today?

Was Andrew Outed at Work? Yes

Andrew does not come out as gay at work. The firm is a conservative organization that judges employees down to their earrings, and the executives are homophobes who mock homosexuals. If they had found out about Andrew’s sexual orientation, they would have penalized him in some way. The same goes for the fact that he is an AIDS patient. Although AIDS is a disease transmitted through an infected person’s blood, sperm, vaginal secretion, and breast milk, and has nothing to do with sexual orientation, in the 1980s, it was referred to as the “gay disease” and “gay cancer,” leading to unwarranted speculation and fear. Based on this, AIDS was used as a means to discriminate against homosexuals: homophobic protestors hold signs that read “GAY: Got Aids Yet” as Andrew walks out of the courthouse. The executives of the firm talk about AIDS as if it were the fault of gay people.

Andrew hides his illness by carrying out his given work diligently, even if it means giving up his treatment. However, when an executive recognizes he has AIDS because of the red

spot on his forehead, his sexual identity quickly spreads at the firm. Andrew’s forced coming out* was inevitable, but just as importantly, Andrew’s history of hiding his sexuality was also inevitable. LGBTQ

people struggle with hiding their sexuality in the workplace. According to a 2021 survey of 935 LGBTQ workers by Williams Institute at UCLA School of Law, 50.4 percent had not told their superiors their gender identity or sexual orientation. Also, 31.1 percent of respondents said that they had experienced discrimination or hatred at work in the past five years. These negative experiences force LGBTQ people to hide their sexual identity at work.

However, the workplace is literally a “work” place. Is there any duty to be open about being gay or not at work? Do workers’ private lives affect their public performance? Andrew says at trial, “You do not bring your personal life into a law firm. You are not supposed to have a personal life, really.” Whether gay or straight, there is no reason to bring one’s personal life into work if it does not affect the work at all in any way. Excessive interference in personal things is an invasion of privacy and, if severe enough, tantamount to workplace bullying.

According to a 2017 survey by Korea Labor Institute, 66.4 percent of the cases of invasion of privacy in the workplace correspond to “private life invasion.” Private life includes love affairs, marriage, family affairs, personal affairs, appearance, hobbies, and activities outside of working hours. The issue of personal invasion in the workplace is not confined to LGBTQ people. It is essential that all workplaces allow workers to disclose or not disclose their private lives at will.



▲ At this point in the movie, when homosexuality is being severely criticized, Andrew and Joe are surrounded by a crowd of reporters and protesters as they leave the courthouse.



▲ When Joe realizes that Andrew has AIDS, he looks down at his hand that just held Andrew’s for a handshake.

*Coming out: According to the Oxford Language Dictionary, “coming out” is the act of telling the world that one is homosexual.



Was Andrew Unfairly Dismissed? Yes



▲ The executives of the law firm who are sued by Andrew are in the court to argue their case.

“Andy, your place in the future of this firm is no longer secure. We do not think it is fair to keep you here, where your future is limited.” This is what an executive says when the firm fires Andrew

for his “bad attitude” and “ability shortage.” When Andrew complains, they cite his bad attitude again. Does he deserve to be fired? Andrew is competent enough to be in charge of the most important case and has a good attitude that keeps all his clients satisfied. Then, does he deserve to be fired for not informing his employer of having AIDS? AIDS was how executives came to know about Andrew’s homosexuality, and eventually, what they hated was homosexuality itself rather than AIDS. An executive says at the trial, “I felt, and still feel, nothing but the deepest sympathy and compassion for people like Maria, who have contracted this terrible disease through no fault of their own like a transfusion.” As this conversation implies, the firm regards gay men’s AIDS as a self-imposed “fault.” Ultimately, Andrew’s dismissal was a product of anti-homosexual discrimination.


Unfair dismissal means firing a worker without any reasonable cause. The issue of unfair dismissal of LGBTQ people came to the forefront in 1968 when the U.S. IT company, IBM, fired a transgender employee. The victim told her boss that she was in the process of a sex change, and got fired the same year. IBM apologized to her in 2020, 52 years later. That was because, on June 15, 2020, the Supreme Court of the United States (SCOTUS) declared a ruling banning

LGBTQ discrimination in the workplace. The Supreme Court’s support has spurred lawsuits from LGBTQ people who had been wrongfully fired in the past. There have been cases of men being fired for joining a gay softball club or for wearing female clothing at work after changing sex. It appeared that LGBTQ people were protected under the law, but in 2022, the online media outlet Electric reported that Elon Musk, the head of the automobile company Tesla, fired multiple executives working for diversity-related programs, including a representative of a company alliance for LGBTQ rights. Musk believed that LGBTQ organizations ruin civil society. The fired employees, like Andrew, were competent enough to be promoted three times, and one was a chief engineer. Discriminative thinking resulted in their dismissal, not job performance.

Similar unfair dismissals are being repeated in South Korea today, but the fundamental problem is that the issue is not even discussed. According to a 2021 survey of 1,005 Korean citizens over the age of 18 by Gallup Korea, a polling organization, 12 percent of respondents answered that firing a coworker for being LGBTQ is appropriate. Considering that 22 percent took this position in 2001, LGBTQ acceptance has improved. But since 2014, the percentage has been frozen at 12 percent. The unfortunate reality is that lots of people still have no interests in LGBTQ people being unfairly dismissed. Thus, it is important to create a public discourse that encourages individuals to discuss the issue in addition to improving the system.



▲ IBM looks back upon its discriminatory past and is now committed to defending LGBTQ rights.

What if a man is fired for being short, for having a child, for having a medical condition, for being a vegan, or for being a sports lover? The unfair dismissal for being homosexual means that other personal qualities could be a cause for being fired, too. Considering our own diverse physical features and values, it is clear that there are many different human identities, and when it comes to being valued as a worker, one’s personal identity should not take precedence over job performance. However, many people still approve of unfair dismissal and fail to view it as a problem due to the prejudice against LGBTQ people. The Argus hopes for a day when all identities can be respected equally. 

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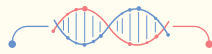
“Where Are You From?” The Pride and Prejudice of Racism



By Kim Su-yeon

Staff Reporter of Theory & Critique Section

Walking on campus or taking courses in the classroom, students meet people from various cultures every day. Globalization has blurred the boundaries between countries. Thus, meeting people who look different is natural. Still, a bit of awkwardness remains when facing people from other countries. People are often classified by race, and some mistakenly believe that people are largely classified into three categories: black, white, and yellow. However, this narrow and outdated classification is a leap of logic and leads to problems of racist discrimination. Celebrating “Together Day” on May 20, The Argus explores the history of racism and some of the environmental factors that shaped the appearance of modern people and then points out the contradictions of color classification, providing readers with an opportunity to learn about similarities and differences among human beings.



How Did Racism Develop?



▲ Enslaved men(bottom, R) pack tobacco into barrels, while two white men(bottom, L) keep recording the number of filled containers.

“White Only;” “Black Lives Matter;” “Stop Asian Hate.” These phrases have been in the news and demonstrate that racism is still pervasive. Racism assumes that human beings can be categorized by skin color and that skin color can be used to judge the superiority of certain ethnic groups. Gun violence against African Americans in the U.S., Asian hate seen in Europe during the pandemic, and discrimination against Southeast Asian migrant workers in South Korea illustrate that the world is still trapped

in racism. How did the concept of judging people based on their skin color appear?

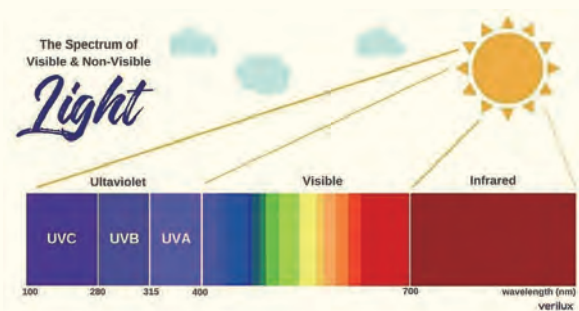
According to the book, “Because I am Asian: Politics of Hate and Discrimination” (2022) and “Once Have Called: the history of Racism and Pejoratives in South Korea” (2022), written by Jeong Hoi-ok, Professor of Political Science and Diplomacy at Myongji University, the word “race” was coined in the process of one group meeting another group and comparing themselves to each other. During the Age of Discovery from the 15th century to the 17th century, Europeans reached Africa and found themselves being relatively “whiter” than native Africans. They came up with the idea that they could distinguish people by their skin color. Afterward, in the 18th century, as slavery spread across America, race was firmly established as a criterion for classifying and judging human beings. At that time, tobacco planters began to look for cheap labor. Accordingly, plantation owners with white skin tried to justify exploiting black people and Native Americans by separating them from white people and treating them horribly. They spread the belief that people with dark skin are born inferior and unable to be improved even with education. That belief solidified into the racism which wrongly deemed “white” as superior to “black.” Professor Jeong adds, “The ruling group often puts forth an argument that the ruled are inherently inferior to justify its dominance.” When the ruling group tries to gain more power and resources, the ruled can resist the ruling with an uprising. To repress such an uprising in advance, the ruling group needs to prove their control is reasonable. The ideology of racism helps their justification. In other words, in

America, racism emerged when people with white skin created prejudice against certain groups to justify the exploitation of African American and Native Americans. Racism has reproduced undesirable norms where differences in skin color can be the basis of discrimination across the world.



Appearances Depending on the Environment

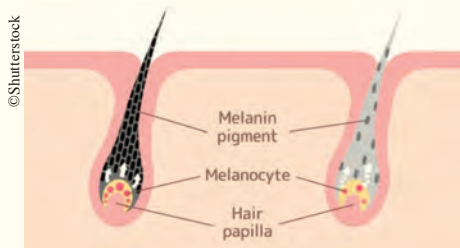
☘ Differences in Colors of Skin, Eyes, and Hair: Sunlight Determines Color



▲ UVA and UVB are two constitutive rays of sunlight that affect skin color.

Distinct differences in skin color have been the foundation of racist ideologies for a long time. However, different skin colors just indicate that different groups of people have grown up in different environments. According to the book, “Skin: A Natural History” (2012) written by Nina G. Jablonski, it is sunlight that determines the appearance of modern human beings. Early hominids living in Africa near the equator were exposed to strong sunlight. As their bodies gained lots of heat through intense exercise, they needed to release heat efficiently to maintain their body temperature. Furless skin with multiple sweat glands was the optimal condition to release body heat. However, without fur, which protects the skin by absorbing or reflecting ultraviolet rays (UV), hominids’ skin became vulnerable to sunlight. To survive, their skin went through biological changes that increased melanin.* Two constitutive rays of sunlight affect skin color: UVA with a long wavelength and UVB with a middle wavelength. UVA destroys folic acid, one of the water-soluble vitamins, B-complex, disturbing the production of DNA and reproduction. UVB synthesizes vitamin D and helps produce calcium, an essential element of reproduction. At the same time, it can cause skin burns or skin cancer when it is absorbed in large amounts. Thus, it is important to absorb the proper amount of UV, and melanin controls that.

Passing through the atmosphere, UVA and 10 percent of UVB reach each region. As the amount of sunlight reaching each region depends on latitude, the amount of UVA and UVB also differs accordingly. UVA strongly strikes the equatorial regions. Therefore, for those who live near the equator, maximizing the amount of melanin that blocks UVA is most favorable for their survival. The dark skin found in native Africans in equatorial regions is a byproduct of adaptation for survival. On the other hand, at higher latitudes, the sun is lower and the atmosphere is thicker than in low-latitude regions. Thus, most UVB is absorbed by the atmosphere, and only small amounts reached high-latitude regions. As some hominids with dark skin moved to higher latitude regions outside of Africa, UVB exposure was greatly reduced. In the high-latitude regions, their dark skin, including large amounts of melanin, sharply blocked UVB. This disturbed vitamin D synthesis and threatened their survival. For that reason, skin became lighter in color so that it could absorb the proper amount of UVB to synthesize vitamin D. As a result, hominids with pale skin appeared. Melanin determines not only skin color but also the color of the eyes



▲ Melanocytes, the cells that produce melanin, synthesize melanin from the hair papilla and color the hair.

and hair. The greater amount of melanin in the iris, the darker the eyes. Blue eyes indicate one has a low amount of melanin. Similarly, melanocytes, the cells that produce melanin, synthesize melanin from the hair bulb and color the hair. People with a large amount of melanin tend to have dark hair, while people with less melanin have blond hair. In other words, people living near the equator generally have darker skin, eyes, and hair, and people living in higher-latitude regions have brighter skin and hair, and blue eyes.

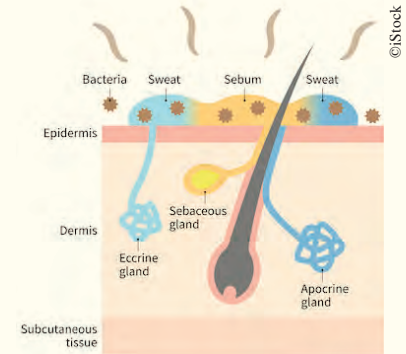
*Melanin: Melanin is a dark pigment that determines one's skin color. The pigment is present in the skin, hair, eyes, and so on, absorbing ultraviolet rays not penetrating the skin.

Differences in Body Odor: Genes and Eating Habits

Determine Odor

In addition to changes in appearance, human beings went through several other changes while adapting to different

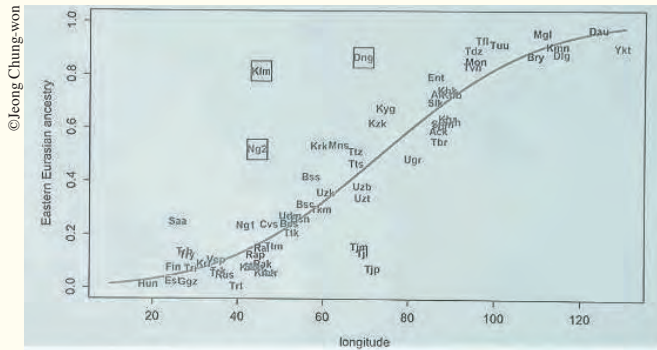
environments and this even impacted not only how people looked, but how they smelled. Body odor is often tied to race and used to justify racist discrimination with the logic that certain group smells unpleasant. However, body odor is just a natural phenomenon derived



▲ The fatty acid and chemicals secreted from the apocrine sweat gland react with bacteria and release skin gas.

from genetic diversity and different eating habits. Body odor occurs when constitutive substances in the body are released in the form of gas. Sweat glands and eating habits affect one's body odor. First of all, when sweat glands secrete sweat, resident floras* inside the skin make sebum to be oxidized, producing skin gas. Human beings have two types of sweat glands: one is the eccrine sweat gland, and the other is the apocrine sweat gland. The eccrine sweat gland secretes odorless sweat. On the other hand, the apocrine sweat gland secretes odorous sweat. When the fatty acid and chemicals secreted from the apocrine sweat gland react with bacteria, odorous skin gas is released. Sweat odor varies from person to person depending on their genes. The genes of human beings have cumulated in different proportions depending on the region where one has lived. People have both the G-type gene and the A-type gene inside their bodies. A person with more G-type genes tends to smell more unpleasant than a person with more A-type genes. In the body of people with more of the G-type genes, the apocrine sweat gland secretes sticky sweat with protein, fat, and ammonia. After that, the bacteria decompose these substances and cause body odor. Generally, Africans, South Americans, and Europeans tend to have more of the G-type genes, while Asians have more of the A-type genes.

Next, substances released from blood in the form of skin gas also affect one's body odor. Accordingly, one's eating habits can affect his or her body odor. The high-fat and high-calorie diets including a large amount of dairy products such as milk, butter, and cheese, may promote sebum secretion, causing body odors. Similarly, when one eats garlic, an oily yellow liquid called allicin, which gives garlic its distinctive odor, is released into the blood. Afterward, allicin mixes with sweat and spit to be released in the form of odorous skin gas. In certain regions, people used to eat food with a lot of spices



▲ Moving to the east, the East Asian gene pool steadily increases.



▲ The Khanty's appearance is similar to that of Asians but they have blond hair and blue eyes which are similar to those of Westerners.

West Africa also branched off from the root. As a result of this process, as genetic variations have gradually cumulated, modern humans living in Africa now have a great variety of genetic traits.

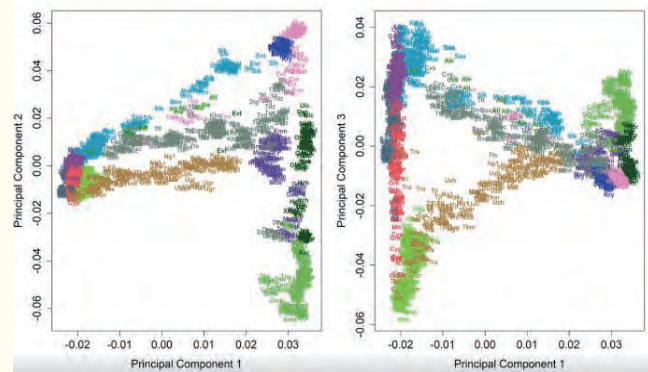
Thus, as the genetic

characteristics of African ethnic groups vary, it is a hasty generalization to categorize all Africans as black.

Then what about other skin colors such as “white” and “yellow?” Regarding this, Jeong Choong-won, Assistant Professor of Biological Sciences at Seoul National University, says, “A large number of people within the intermediate gene pool* who geographically live in middle regions should also be included for consideration.” According to Professor Jeong’s genetic research, the inland Eurasian people have gradually become genetically similar to East Asians, as they live close to the East, while those who live close to the West are genetically

close to Europeans and Middle Easterners. The results indicate that the genetic traits of human beings do not change rapidly; rather, they change gradually and successively depending on the region. For instance, the Khanty, one of the Russian minority groups, has intermediate genetic traits. Their general appearance is close to that of Asians, but they have blond hair and blue eyes, which are genetically close to Westerners. The Khanty have the same ancestors as the Finnish, but as they moved to the East and mixed with the Mongoloid, they gained the genetic traits of Asians along with those of the Finnish. Professor Jeong adds, “It is clear that modern human beings are genetically different and diverse. However, that diversity cannot be classified into very distinct clusters: white, black, and yellow. Rather, genetic diversity is similar to the colors of the rainbow, which have changed successively. Thus, it does not make sense to artificially split up the genetic traits into three categories.” In other words, even though there are genetic differences between ethnic groups, it is difficult to classify them into a few clusters because such differences are successive rather than fragmented.

*Gene Pool: According to the National Human Genome Research Institute, the gene pool refers to the combination of all the genes (including alleles) present in a reproducing population or species.

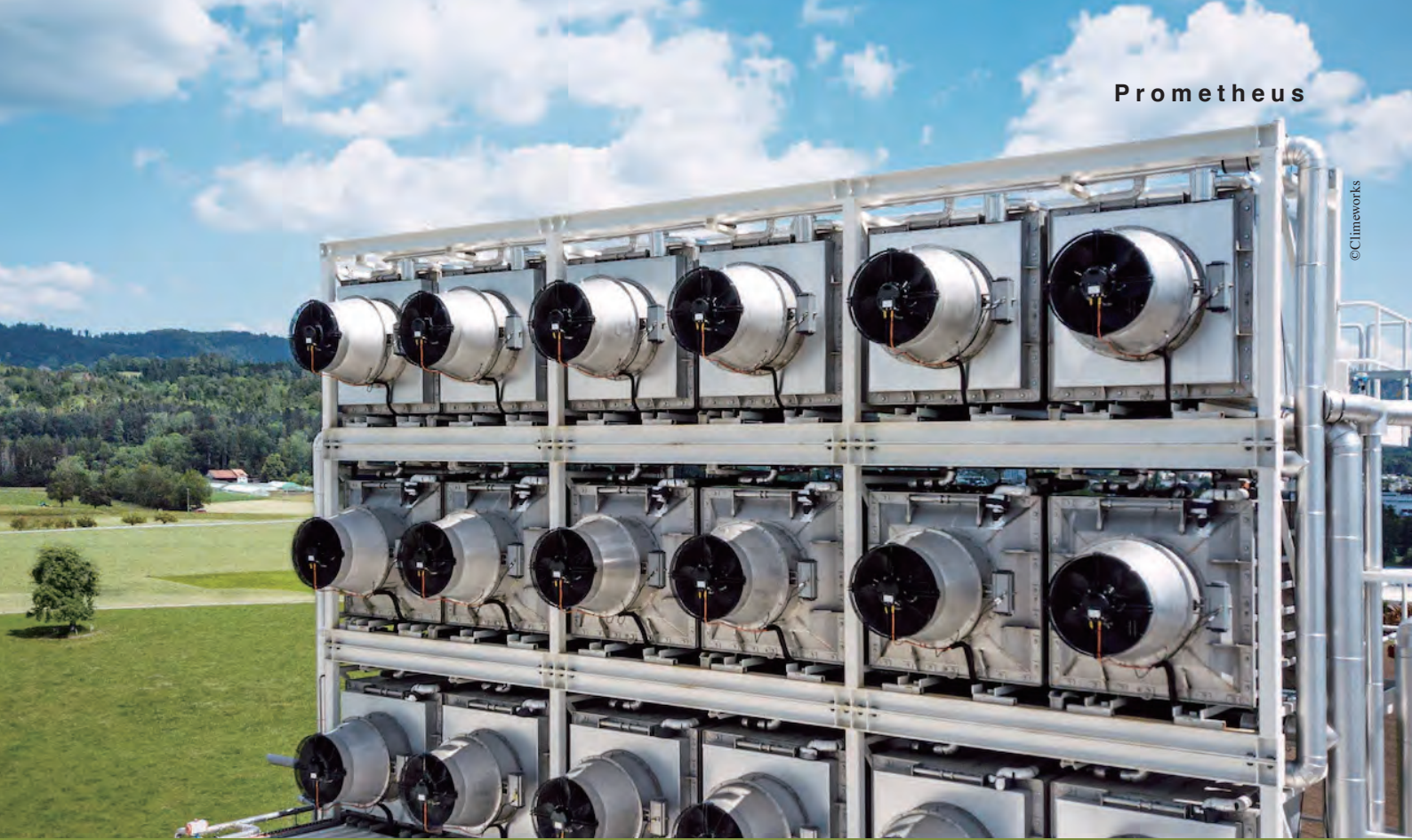


▲ The inland Eurasians’ genes are gradually changing, forming a continuum.

©Jeong Chung-won

From throwing something at foreign travelers to shootings targeting certain ethnic groups, the world is still trapped in racism. Racism has justified discrimination due to differences in skin color, creating unnecessary conflict between ethnic groups. As modern human genetic diversity demonstrates, grouping people on Earth according to skin color is outdated and biased. Moreover, it is dangerous to use this classification as a reason for discrimination against certain groups. People look different, but at the same time, they are very similar, as they belong to a common species. Focusing on similarities rather than differences can be a shortcut to reconciliation. Thinking of “similar” first rather than “different” will lead to a more inclusive society. 🌍

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Capture Our Future: DAC

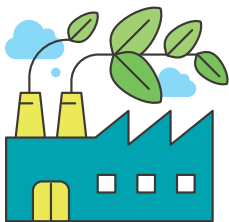


By Ryu Hyo-rin

Staff Reporter of Theory & Critique Section

“A 10 percent increase in carbon dioxide in the atmosphere would melt polar ice and sink New York.” This is what Edward Teller, a physicist also known as the father of the hydrogen bomb, said at a meeting hosted by the American Petroleum Institute in 1959. As Teller said, the Earth is getting sick from the yearly increase in greenhouse gas emissions. According to observations made by the National Snow and Ice Data Center (NSIDC) of the United States in February 2023, Antarctica’s sea ice area reached a record low of 1.91 million square kilometers. A new technology has emerged like a comet in this crisis. It is Direct Air Capture (DAC). The Korean government plans to secure a special exhibition space for DAC at the Busan World Climate Industry Expo, which will be held from May 24 to 27, 2023, to promote the DAC technology. As the event is an exhibition for diplomatic envoys and international business professionals, it also means that the vision and technology of DAC is recognized as a leading progress toward a carbon-neutral response to the climate crisis. What is the DAC technology expected to contribute to carbon neutrality? The Argus seeks to explore how DAC can be utilized for carbon neutrality.

What is DAC?



Direct Air Capture (DAC) is a technology by means of which large amounts of carbon dioxide can be effectively captured where it is generated in places with high waste emissions such as cement plants and biomass power plants. The concept of carbon capture first emerged in academia in 1999 when Klaus Lackner, a chemical engineer at Arizona State University in the U.S., suggested that direct collection of carbon dioxide from the air would be most effective to solve climate change. After that, in 2017, Swiss climate tech startup, Climeworks, succeeded in developing industrial DAC devices for the first time. Since then, DAC has been actively researched and invested in by various research institutes and companies. Maersk, the world's No. 1 shipping company based in Denmark, has invested in Prometheus Fuels, an eco-friendly energy startup that uses the DAC technology to produce E-Fuel, a carbon-neutral fuel.



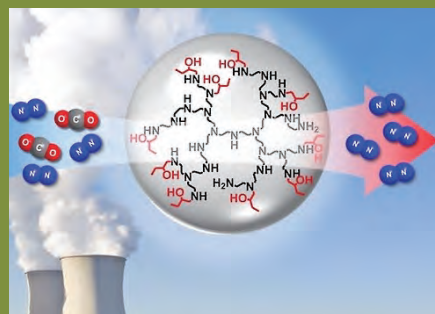
DAC: The Rising Star of Carbon Neutrality

■ How the DAC Technology Contributes to Carbon Neutrality

Although DAC is still in its early stages of introduction worldwide, it is drawing attention as a promising technology to achieve carbon neutrality by 2050, the goal of the Paris Agreement.* DAC is a chemical approach among carbon dioxide removal approaches. To understand DAC, you first need to know what carbon dioxide removal is. The carbon dioxide removal approach is a method whereby greenhouse gases are directly removed from the atmosphere and stored in land, underground, marine storage, or products. Therefore, DAC is a method of directly removing, storing, or utilizing carbon dioxide in the atmosphere through a chemical reaction with an absorbent. The key to the DAC process is absorption. Absorbents are substances that combine chemically or physically with carbon dioxide to capture it in the air. In general, the combination reaction between the absorbent and carbon dioxide occurs spontaneously as an exothermic reaction. After that, the absorbed carbon dioxide must be separated from the absorbent, and the reaction occurs only when heat or other energy is applied as an endothermic reaction. This is called desorption. In other words, DAC absorbs carbon dioxide in the air through combining with an absorbent, applies other energy to extract carbon dioxide from the absorbent, and then stores or utilizes it.

However, cost and environmental problems may arise

because external energy is required during this carbon dioxide desorption process. Removing



▲ DAC captures carbon dioxide from the air.

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carbon and absorbent requires heating or pressure, and electrical energy is required for this. To this end, when a thermal power plant produces electrical energy, an environmental problem arises in which more carbon is generated. However, this energy can be replaced with natural energy such as solar and wind power, drawing attention and investment from academia as a potential carbon dioxide removal technology. In this respect, DAC develops organically with the research of other eco-friendly energy technologies.

*Paris Agreement: According to the Hankyung Economic Terminology Dictionary, this agreement was adopted by 195 parties at the 21st session of the Conference of the Parties (COP21) in Paris on December 12, 2015. The agreement was signed under the leadership of the 44th U.S. President Barack Obama. It contains a step-by-step reduction plan in greenhouse gas emissions to prevent the global average temperature from rising more than 2 Celsius compared to the pre-industrial level.

■ Why DAC is challenging

Why is DAC attracting attention despite other existing carbon removal technologies? According to Park Ho-beom, a professor of energy engineering at Hanyang University, existing carbon removal technology could



▲ Captured air can be utilized or stored.

only capture carbon in closed air with concentrations of 10 to 15 percent, emitted from emission sources such as factories and thermal power plants. However, DAC can capture carbon even in an open atmosphere with a relatively low carbon concentration of 0.04 percent. In other words, while existing carbon capture technology has a geographical limitation requiring installation only in places with high carbon concentrations, DAC can be installed anywhere carbon exists regardless of carbon concentration. In addition, existing ecological carbon removal methods have been greatly limited in removing existing amounts of carbon. According to Professor Park, in the ecological cycle, humans and animals emit carbon through exhalation and flatulence; and trees and oceans absorb it to maintain an appropriate ratio of carbon and oxygen in the air. However, at present, humans are emitting excessive carbon artificially to a level that forests and oceans cannot handle. There is a great significance and difference in that DAC overcomes the limitations of these ecological carbon removal methods. In addition, existing ecological carbon removal methods such as afforestation and reforestation, which create forests by artificial methods of planting trees or sowing seeds, create the risk of carbon dioxide leakage; but DAC has a low risk of carbon dioxide leakage. This is because carbon collected by DAC is stored in liquid or mineral form. On the other hand, the ecological carbon removal method can be said to have a risk of carbon emissions due to environmental factors such as fire.

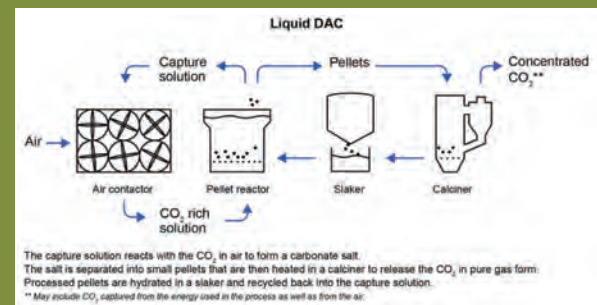
What happens to the carbon that is gathered through DAC? It is difficult to calculate the economic value with existing technologies, but DAC is not just stored, so new economic products can be created. It is CCUS that makes this possible. CCUS is a technology closely related to DAC. CCUS stands for combination of two technologies: Carbon Capture Storage (CCS), which captures and stores carbon dioxide; and Carbon Capture Utilization (CCU),

which captures and utilizes carbon dioxide. Simply put, it is a technology that collects, stores, and utilizes carbon dioxide emitted into the atmosphere. In the CCUS process, carbon is recycled through various conversions such as chemical conversion and mineralization. It is also used as a raw material for eco-friendly building materials by converting carbon into calcium carbonate using mineralization technology. The remaining carbon dioxide can be safely stored underground or under the sea to prevent it from being released back into the atmosphere. It can be safely stored by collecting undersea natural gas and storing liquefied or solidified carbon in the remaining space. Therefore, DAC has the advantage of not only capturing carbon, but also of storing and utilizing it when combined with CCUS.



What are the methods of the DAC technology and the principles of each method?

■ Liquid



▲ The core principle of the liquid method is to utilize the characteristic of carbon dioxide.

The method of collecting carbon with DAC is divided into liquid, solid, and membrane methods according to the characteristics of the absorbent. First, the liquid is also called the mono ethanol amine* method. According to Oh Chae-woon, a principal researcher at the National Institute of Green Technology, the core principle of liquid method is to utilize the characteristic of carbon dioxide; it becomes acidic when it dissolves. First, when an absorbent made of a chemical such as an amine is dissolved in water, the water becomes basic. When air containing carbon dioxide is injected into this basic aqueous solution, carbon dioxide (acidic) and absorbent (alkalinity, basicity) react in neutralization,* resulting in adsorption. At this

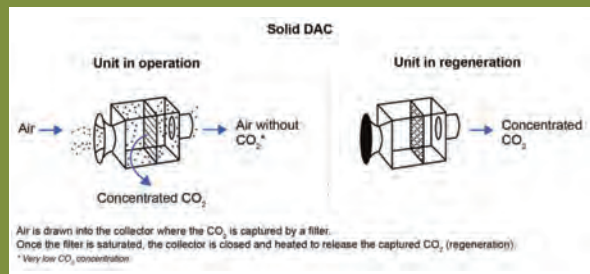
time, sodium carbonate (Na_2CO_3) corresponding to salt is produced, and the DAC process must separate carbon dioxide from this basic salt to complete the liquid method. Researcher Oh says: “This separation process consists of two main steps. First, calcium hydroxide ($\text{Ca}(\text{OH})_2$) is added to the compound sodium carbonate to precipitate calcium carbonate (CaCO_3), and high-temperature heat of about 900 Celsius to this precipitate separates carbon dioxide.” In other words, carbon dioxide must be removed from the absorbent through the process of precipitation and heating using thermal energy to complete the liquid DAC method. Professor Park explains, “Liquid method is the oldest and most studied one and is now used to purify the air in submarines.” However, since it requires high thermal energy in the process of using an absorbent, there is a possibility of discharging pollutants generated from thermal energy production. In addition, there is a risk of corrosion because the method requires water. Therefore, liquid is the most widely used technique; and at the same time, it is a method that requires countermeasures against concerns.

*Amine: It is a compound in which the hydrogen atom (H) of ammonia (NH_3) is replaced with a hydrocarbon group, which is all atomic groups formed by combining carbon (C) and hydrogen.

*Neutralization: A neutralization reaction is a phenomenon in which acid and basicity meet to produce water and salt. For example, cleaning an acidic oily dish with basic baking soda produces sodium fatty acid salt corresponding to water and soap, which removes the oil.

■ Solid

The second is solid, and it is a method of collecting carbon dioxide in the atmosphere using solid adsorbents in the form of tiny crystals. According to researcher Oh, the core principle of the solid method is to utilize carbon dioxide absorbent and chemical properties that can absorb only carbon dioxide. First, the absorbent is made into a solid carrier with holes to form an environment where carbon dioxide is easily contacted. When a chemical with excellent carbon dioxide capture capacity, such as amine, is put into the hole of this carrier, a solid absorbent is ready. Thereafter, carbon dioxide is passed through the completed absorbent. Then, carbon dioxide adheres to the amine in the absorbent and the adsorption ends. This method also requires separating the carbon dioxide attached to the absorbent, like the liquid method, and to separate the carbon dioxide bonded to the absorbent, a change in pressure or temperature is required. First,



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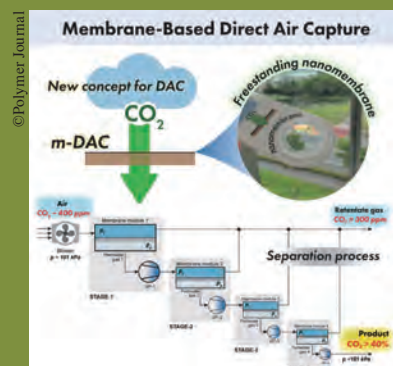
▲ The core principle of the solid method is to utilize carbon dioxide absorbent and chemical properties that can absorb only carbon dioxide.

the method of separation using pressure is to lower the pressure in the presence of absorbent and air. As the pressure of the gas increases, the number of molecules of carbon dioxide colliding with the solid surface per hour increases, and the number of adsorptions increases. Conversely, lowering the pressure of the gas reduces the number of molecules of carbon dioxide colliding with the solid absorbent per hour, resulting in natural desorption. Finally, there is a way to use temperature change. As the temperature increases, the movement of air molecules becomes more active, and they tend to be desorbed rather than adsorbed on solids. At low temperatures, the movement of molecules slows down, and carbon dioxide binds to the absorbent. Conversely, as the temperature increases, the movement of air molecules becomes active, and there is a tendency of desorption rather than adsorption on solids. Therefore, raising the temperature to about 100 Celsius causes carbon dioxide to separate from the absorbent. According to the “National Technology Proposal Insight with Explanation: Demonstration and Utilization of DAC Technology” published by the Korea Presidential Commission on Carbon Neutrality and Green Growth in 2022, the solid method has an advantage over liquid method in terms of energy and water supply required for the process. However, although it is easy to modularize* solid method facilities, it may be more disadvantageous than the liquid method and has a limitation in that the unit price of the absorbent is relatively high.

*Modularization: It refers to the degree to which components of a system can be separated and recombined.

■ Membrane

The third is the membrane method, which uses the molecular size and speed difference of the gas passing



▲ The membrane method uses the property of the gas moving from high to low pressure.

through the membrane to selectively permeate only carbon dioxide from the air and collect it. A membrane is a film that selectively transmits a specific molecule or ion. The method uses the property of the gas moving from high to low pressure. Professor Park explains, “When pressure is applied to the air, the air naturally moves from a high-pressure to a low-pressure film and passes through the film.” At this time, the film membrane filters gases such as nitrogen and oxygen and passes only carbon dioxide. The membrane method ends in this process, so the membrane method is known as an energy-efficient and eco-friendly process because it doesn’t emit harmful substances. Because of these characteristics, it is one of the most studied methods at present. As a result, in order to maximize separation performance, various forms, such as hollow-fiber types like wheat straw, and flat plate types were studied depending on the material and structure of the membrane. In addition, the biggest advantage of separator technology is that it has a small installation area, does not require thermal energy, and is simple to operate. Therefore, it is considered the only DAC technology that can continuously remove carbon dioxide from various environments, including small sources of pollutants and urban centers.



Use of carbon after capturing it with DAC technology

■ Ways of application using the DAC technology only

One of the main factors in carbon emissions is transportation. However, this mobility can also be a way to collect carbon if combined with DAC. A representative class would be the automobile. Diesel and gasoline cars, which used to use oil as fuel, are now being replaced by

electric cars. Electric cars do not need oil, so they do not need an internal combustion engine located under the hood of the car. Therefore, the development of a vehicle that fills the empty space under the hood with a DAC device is being carried out. The Saudi Arabian oil company, Aramco, is developing carbon capture and storage technology that can be applied to passenger cars and trucks using mobile carbon capture technology. In general, engines convert 25 to 40 percent of fuel energy into propulsion. The rest is emitted in the form of heat through a radiator; and energy can be recovered by converting this wasted heat into energy to power carbon dioxide capture and compressor operation. The carbon collection system reacts with the material that dissolves this emission gas to collect carbon dioxide, compresses carbon dioxide, and stores it safely in the tank in the vehicle. Commercial vehicles such as trucks generally return to a garage after operating hours, so carbon dioxide stored in such vehicles can easily be removed. Although the principle is the same as the passenger car model, a larger energy recovery system can be installed in larger vehicles. As a result, it is possible to collect more carbon dioxide than from a passenger car. Thus, the collection rate of carbon dioxide emissions from trucks has risen to 40 percent, achieving the best performance so far.

In addition, there are carbon absorption facilities using the DAC technology. DAC has the advantage of being able to be installed anywhere, so the development of absorption facilities is now taking place. A representative example is the DAC facility of Carbon Engineering, a Canadian-based clean energy company. The company draws air through large air contacts based on liquid absorption technology. Thereafter, the absorbed air is passed through a potassium hydroxide solution, which is an absorbent, to collect carbon dioxide in the form of carbonate. The



▲ Aramco develops mobility with DAC technology.

company has established a megaton-scale DAC plant that can capture carbon dioxide at a cost of \$100-\$230 per ton. In addition, in the American city of Boston, artificial structures called TREEPODS, which resemble the form of trees, are helping carbon reduction programs. TREEPODS mimic the form of the Dragon Blood Tree,* which resembles an umbrella, and not only provide shade but serve as urban lighting towers. Air and carbon dioxide meet structures dispersed in branches and these structures selectively capture only carbon dioxide in the contacted air through reactions based on liquid method. In addition, there is a plan to install DAC in factories that require pure carbon dioxides, such as soda and dry ice plants. These examples show that there are various ways to utilize DAC.

*Dragon Blood Tree: It is a plant that grows on Tenerife Island in the Canary Islands. Thousands of hook-shaped branches extending from a single stem grow with pointed leaves. Its name comes from the fact that the sap of this tree is blood red.

■ CCUS and DAC combined

Can you believe that the carbon dioxide emitted by humans could be turned into diamonds? When CCUS and DAC are combined, carbon can be reborn into various materials, one of which is lab-grown diamonds. After converting the collected carbon dioxide into a hydrocarbon,* which is the raw material of a diamond, heat and pressure are applied to complete the diamond. Lab-grown diamonds have the same chemical properties as natural mined diamonds and are not visually distinguishable. In addition, such diamonds have been certified by the International Gemological Institute (IGI), an international appraisal agency, along with natural diamonds. Artificial diamonds made of carbon are cheaper than natural diamonds and require less time to produce. Lab-grown diamonds can be expected to have




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▲ Lanza Tech collaborates with Lululemon to make yoga clothes with threads and fabrics made from emitted carbon.

a new economic effect on the gem and precious metals market.

The collected carbon can be reborn not only as diamonds, which are minerals, but also as fibers often used in everyday life. Lanza Tech, a carbon-based company in Chicago, collaborated with Lululemon of Canada, a world-renowned sportswear company, for the first time in the world to create threads and fabrics through emitted carbon. Carbon dioxide (CO₂) was converted into ethanol (C₂H₆O) to make a polyester fabric and reborn as yoga clothes. Large amounts of carbon are emitted during the manufacture of yoga clothes, and yoga clothes using carbon-recycled fibers have great environmental significance in that they recycle the emitted carbon rather than emit carbon during the manufacturing process. In addition to diamonds and yoga clothes, food containers and concrete can be produced using recycled carbon. The transformation of carbon with CCUS and DAC has environmentally friendly, as well as economic, effects.

*Hydrocarbon: An organic compound composed solely of carbon and hydrogen.

DAC is rapidly emerging as an innovative solution to the carbon problem. However, DAC is not a definitive solution. Professor Park notes that humans should not rely on DAC alone, but should make efforts to reduce carbon emissions and enter the minus-carbon stage. While it is still true that DAC can be one of the current countermeasures against carbon growth, it will only delay the last moments of mankind. The issue of human carbon neutrality is now a time bomb-like task for mankind, and it is too late to leave this task to technology alone. In other words, human efforts to voluntarily reduce carbon should be continued. How about practicing carbon neutrality in daily life from now on for a future where everyone can breathe a little more comfortably 30 years from now? 

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Ultraman of Earth, for REAL!

By Lee Jue-hyun

Associate Editor of Theory & Critique Section

“The hero who saves the Earth: His name is Ultraman.” In the representative hero animation of Japan, Ultraman struggles to protect the Earth. He uses a transformation capsule, shoots beams from his arms, and showcases various other techniques, like many other heroes before him. Watching the dazzling abilities of heroes who coolly resolve crisis situations makes people wish that there were heroes in real life too. Could Ultraman actually exist? It is not entirely impossible. The transformation capsule that Ultraman carries, the weapons he uses to defeat enemies, and the suit he wears to defend himself can all be found in similar forms in various places in everyday life. The abilities that kept humans safe and happy in the movies can sometimes be harmful to society when they are actually used. However, Ultraman’s abilities are being used to create a better Earth. What do Ultraman’s abilities look like in everyday life? The Argus introduces the technology used by Ultraman, who is enjoying a second golden age.

[Before Reading]

Protect the Earth! Ultraman

The animation series, “Ultraman,” which first aired on Japanese television in 1966, is a representative superhero in Japan. Ultraman, who has special abilities, fights monsters and protects the Earth. This character has been reproduced in comics and remakes and has been sold as various merchandise, showing its enduring popularity. Ultraman gained tremendous popularity in Asian countries such as Thailand and especially China. Ultraman became a trend after being broadcast in China in 2020 and was selected as the character of the year. In addition, he was included in a 2020 Marvel series and enjoyed worldwide popularity. Furthermore, the animated version of Ultraman, starting with Season One in 2019, is heating up the hearts of Ultraman fans again, as Season Three is set to be released on Netflix in May 2023.



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🌐 Science and Technology in Ultraman

Ultraman Transformation: Beta Capsule

In times of crisis, heroes appear from somewhere to save the Earth. The first thing a hero does in a tense situation is “transformation.” In the hero movie, transformation is essential for the hero. Just the scene of the hero transforming into a new, cool appearance before going out to save people creates anticipation. Ultraman is also an ordinary-looking human being in daily life, but after transformation, he becomes an invincible savior and hero. As Iron Man, a famous hero from Marvel Comics, transforms by putting on his gloves, Ultraman has a transformation capsule called the “Beta Capsule.” Beta Capsule first appeared in the series “Ultraman” (1966), and allowed the protagonist, Shin Hayata, to transform into Ultraman. Hayata had lost his life after colliding with the red marble* of Ultraman who was chasing other monsters. However, Ultraman shared his own life to resurrect Hayata and gave him the Beta Capsule as a gift. By pressing the red button in the center of the capsule, Hayata can transform into Ultraman with a bright flash, and plasma spark energy is emitted. The plasma spark is a huge energy source inside the Beta Capsule, which is an artificial sun inside Ultraman. The special radiation emitted by this plasma spark is the source of Ultraman’s power. Thanks to the powerful energy of the Beta Capsule, Hayata can transform into Ultraman to fight monsters when the Earth is in danger.

* Red marble: An energy source made of desire cherished by Ultraman that materializes everything one wishes for. If this ability is abused, it has a side effect of growing the user’s dark side and ultimately destroying the world.



▲ Shin Hayata transforms to Ultraman by pressing the red button of Beta Capsule. Huge energy is emitted from the capsule.



Ultraman Weapon: Spacium Beam

What does a hero need to fulfill their role? It is a weapon

that can defeat enemies. If people are asked what the most memorable scene is after watching a movie or a show about heroes, most of them will probably remember the scene where the hero defeats



▲ Spacium Beam is one of the strongest weapons of Ultraman. It is a kind of laser emitted when Ultraman crosses his arms or hands.

a monster that was tormenting humans. The excitement that Ultraman brings is through his “Spacium Beam.” The Spacium Beam is one of Ultraman’s representative weapons. “Spacium” is a virtual alien metal that appears in Ultraman story, meaning space metal as it exists only in space, combining “space” and “ium,” which means material. When Ultraman crosses his arms and shouts “Spacium Beam!” the Spacium Beam is fired from his arms or hands. The Spacium Beam, made of this space metal, is a kind of laser that emits tremendous energy of up to 500,000 degrees and boasts a powerful destructive power that can defeat almost any monster. Monsters hit by the Spacium Beam can feel the weapon’s destructive power as they explode. In the series, “Ultraman Mebius”(2006), it is also used as a key to finally defeat the enemy. However, as the beam is based on Ultraman’s own energy, it consumes his energy. Therefore, there is a limit to the time Ultraman can continuously use the beam; but with its strong destructive power, it plays a significant role in defeating the monsters Ultraman faces.

Ultraman Shield: Ultraman Suit

It is difficult to believe that a hero is invincible just because he has a super attack power. A hero also needs a shield to protect himself. In this regard, even though Ultraman has a capsule that allows him to transform into Ultraman anytime, anywhere, and a powerful Spacium Beam, the “Ultraman Suit” shield is absolutely

► The Ultraman suit changed throughout numerous series, but the combination of red and gray remains the main design.



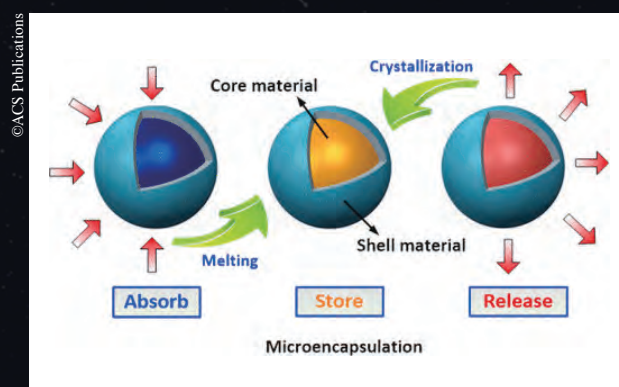
necessary. When Shin Hayata opens the Beta Capsule to transform into Ultraman, he immediately puts on the Ultraman Suit. Basically, the red Ultraman Suit becomes diverse as numerous series of the suit progress, such as Proto Suit, Ultraman Suit, Ultraman Suit ver. 7, Ultraman Suit ver. A; and each has additional abilities, but they are all the same in that they protect Ultraman. Ultraman confronts various monsters that threaten the Earth and is placed in various environments. Sometimes he has to withstand the fire emitted by monsters, be hit by rocks, or fight in outer space. In order to protect Ultraman in all these situations, the Ultraman Suit is designed to withstand various dangerous situations such as high temperatures, high pressures, and radiation with the state-of-the-art technology. Thanks to these abilities, Ultraman wearing the Ultraman suit can always keep the earth in the best condition. How can Ultraman's suit protect him from countless impossible substances from the outside?

🌐 Secret Science Behind Ultraman Strength

Energy Stored in a Small Capsule: PCM

The Beta Capsule holds a vast amount of energy that can transform the protagonist into Ultraman. How can energy be stored in a small capsule and used only when needed? The substance that allows for the extraction of heat energy in desired amounts at any given time, like the beta capsule, is called “Phase Change Material” (PCM). Phase change refers to a substance changing its state based on temperature and pressure. For example, water turns into steam when boiled at 100C and into a solid when frozen at 0C. However, for a substance to undergo a phase change, energy is necessary. To turn water into steam, it must absorb heat energy and reach over 100C, while ice requires releasing heat energy to undergo a phase change. Examining the process of phase change more closely reveals that the substance's state does not change immediately when it reaches the point where temperature or pressure causes the change. It takes additional time for the substance to reach a higher temperature after it has reached the point of phase change. The heat used to change the substance's temperature is called “sensible heat,” while the heat used to change the substance's state is called “latent heat.” PCM utilizes the characteristics of latent heat.

How does a PCM allow for the extraction of the desired amount of energy at the desired time? When a PCM changes from a solid to a liquid, it absorbs latent heat—thermal energy—and stores it until later, when it changes back to a solid. At this point, it releases the stored thermal energy, allowing for controlled heat exchange. However, PCM must be packaged in capsules like the Beta Capsule of Ultraman, as otherwise they could simply flow away once they turn into liquid by absorbing heat. This process of encapsulating PCM is known as “PCM encapsulation.” There are precautions that must be taken, such as ensuring that the capsule is strong and elastic enough to withstand any volume expansion that occurs when the PCM undergoes a phase change. Nevertheless, simply placing a PCM inside a capsule allows for energy storage and controlled release, making it usable in various applications.

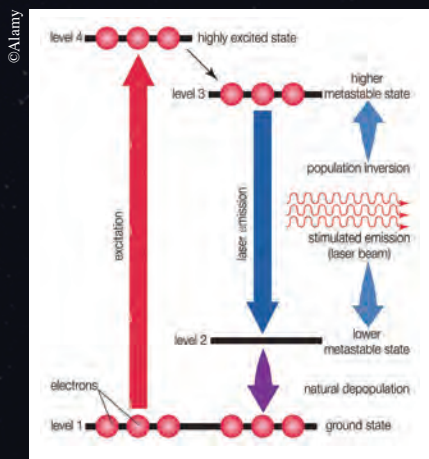


▲ Phase Change Material (PCM) keeps huge amount of energy and emits energy when needed.

Using Light as Weapons: Laser

The Spacium Ray is a kind of laser that emits energy in a concentrated beam. How is Ultraman's Spacium Beam, or laser, created? Laser stands for “Light Amplification by the Stimulated Emission of Radiation,” and utilizes the principle of stimulation and emission. The principle of how lasers are created is as follows: First, a medium* is placed inside a long cylinder with mirrors installed at both ends. Then, external energy is applied to the medium, causing the atoms in the stable state of the medium to absorb the applied energy and become excited with higher energy

* Medium: A medium refers to a material that transfers waves or physical actions from one place to another.



▲ Laser is a beam of intense light induced by the movements of excited atoms.

reflected by the mirrors, it collides with other excited atoms nearby, which then emit twice as much light along with the collided atom's emitted light. This process of emission by collision is called "induced emission." However, if the excited atom releases the light and immediately returns to its low energy state, colliding with other emitted light would be useless. Therefore, the excited atoms must be kept more numerous than the low-energy atoms by continuously supplying external energy.

How can lasers have such intense light? When induced emission occurs, one excited atom emits light and then collides with another excited atom, which leads to stimulated emission and the creation of another beam of light. These two beams of light collide with other excited atoms, creating four beams of light, which collide again with other atoms and double to eight, and so on. This exponentially increasing light is emitted in various directions, but only the light that is reflected by the mirrors and gathered in the gap between them becomes laser light. Therefore, since many beams of light come together and extend in one direction, lasers can produce intense light like Ultraman's Spacium Beam.

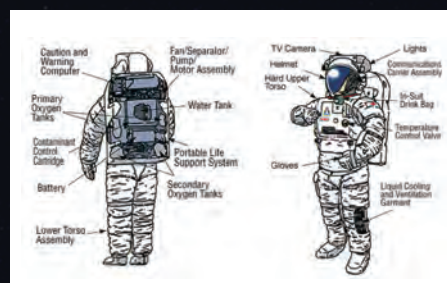
Plastic Reborn as a High-Performance Suit: Polymer

How can a special suit protect Ultraman? Although the principle of the Ultraman suit has yet to be revealed, it is assumed to be composed of a mixture of polymer materials and various future technologies. The Korea Institute of Science and Technology (KIST) defines a polymer material

levels. Atoms in this excited state are unstable and quickly return to their lower energy levels by releasing the absorbed energy. As much light is emitted as the amount of energy released at this time. When the emitted light is

as a large molecule consisting of many identical repeating units connected together. Although natural polymers exist, most of the polymers used in everyday life are synthesized, with plastic being the most representative example. Polymer materials are not only applied to advanced industries such as aerospace, energy, and IT, but also used as materials for daily life, such as automobiles, home appliances, and clothing.

So how can high-performance suits, like the Ultraman suit, be made using polymer materials? First, in order for the suit to have heat resistance, it must have two characteristics. It should not easily catch fire, and it should be made up of multiple layers to minimize the effect of external heat. Similarly, firefighting suits made of polymer materials are the best examples of heat-resistant clothing. The outer layer of a firefighting suit uses aramid fibers to withstand temperatures of up to about 400C. Aramid is short for Aromatic Polyamide: it is five times stronger than steel, can withstand flames at temperatures of 400-500C, does not easily tear even when caught by external materials, and has a high level of durability. Another example is polybenzimidazole, a commercial polymer material that has the highest heat resistance and can withstand temperatures above 600C. However, it is expensive and difficult to process, so it is not widely used. In addition, space suits can be considered to be the most similar to Ultraman suits, as they need to be prepared for unpredictable space environments and have functions beyond those of regular suits. The Liquid Cooling and Ventilation Garment (LCVG) included in the space suit supplies cold water from a Portable Life Support System (PLSS), which is a large backpack-shaped device, and cools the space suit by circulating cool water through 300 feet of tubes close to the astronaut's skin in order to regulate body temperature. This is how high-performance suits like the Ultraman suit can be made using polymer materials.



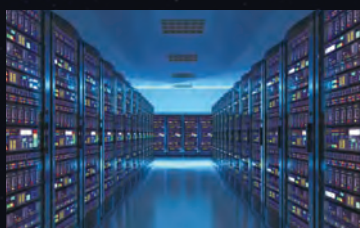
▲ Polymer is used for high-performance suit such as spacesuit. Spacesuit made of polymer has various abilities to protect astronauts in outer space.

Value of Ultraman's Abilities on Earth

Beta Capsule: A Clean Future City Created by PCM

While Ultraman's abilities may seem far-fetched, humans are making efforts to produce some of them. How do Ultraman's abilities manifest in everyday life? The phase transition material used to create the Beta Capsule is contributing to creating a cleaner Earth environment. With the growing recognition of the need for renewable energy as the main energy source in future societies, energy storage technology is receiving attention as a necessary technology. Due to the nature of renewable energy coming from the natural environment, it is impossible to produce energy at a consistent level, so it is necessary to store energy in advance and use it when demand increases. Therefore, the research on how to use and develop energy storage technology more efficiently is actively being conducted.

As lots of works doing on online become more common, the key competitiveness of the IT industry lies in data. The crucial factor is not simply collecting data, but how to effectively utilize all of this data. A data center collects various types of data and operates tens of thousands of servers simultaneously for big data management. When using a computer or phone for a long time or at very high capacities, such devices can malfunction due to overheating. Similarly, it is important to reduce the heat generated by large amounts of data in a data center. Therefore, a technology that employs a phase change material called "Phase Change Solutions" is used to easily reduce the heat in the center. This involves attaching panels filled with the phase change material to the structures where heat is mainly generated within the center. This material absorbs and releases heat generated by the internal electronic equipment, thus optimizing the temperature in the center. This reduces the burden on the center's equipment and enhances safety and performance. By using phase change materials instead of conventional coolers, which are like giant air conditioners running 24/7, the heat generated by the center can be



▲ Datacenter's heat can be easily reduced by PCM which absorbs its and release it outside. PCM reduce the use of air conditioners and is eco-friendly.

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managed in an environmentally friendly way, helping to build a clean future..

Spacium Beam: Metal Oxides Resurrected with Laser Technology

Ultraman's Spacium Beam uses a strong light emitted by a laser to defeat enemies and protect Ultraman himself. However, in modern society, the strong light of lasers is being used not as a weapon to attack someone, but to resurrect rusted metal. When metal is exposed to a moist environment at room temperature or high temperatures for a long time, it rusts and loses its electrical conductivity. This phenomenon is called "oxidation" and occurs when metal and oxygen in the air combine. Until now, metals that have lost their conductivity were considered useless. However, it is now possible to use lasers to restore metal oxides to their pre-oxidized state. "Reduction" reverses the oxidation process and restores the metal to its original state. Generally, when metal is exposed to heat, it oxidizes, but when a laser is directed at its surface, the material absorbs the laser's heat and is reduced. Metal oxides are easier to reduce than other materials. Oxidized metals do not react well with other substances, and since they are already oxidized, they can be stored and handled easily without any special precautions.

Lasers are used in this process because they can achieve stable reduction. Lasers can raise the temperature of materials in a very short time, which allows them to cool quickly. Lee Daeho, Professor of Mechanical Engineering at Gachon University, explains, "In the case of reactions from increasing temperature, if the temperature rises quickly and then falls quickly, only a certain specific reaction occurs and there is no time for subsequent reactions." In other words, using lasers can lead to the reduction of metal oxides without subsequent re-oxidation. The reduction process using lasers is carried out by reducing metal oxides into nano-sized particles. This is because smaller particles dissolve better, and these small particles stick together and grow in size as they are heated. As a result, the smaller particles that were once easily oxidized, like nano particles, have a slower oxidation rate and become similar to typical metals like copper and nickel. Additionally, when several nano particles merge and increase in size, their surface area becomes wider than when they were smaller, so they conduct electricity

better. Therefore, if copper-based electronic components, which are easy to obtain and produce, are made using this technology, even if they oxidize, they can be reduced again; and they can be produced at a lower cost than using expensive metals like gold or silver, which were used in semiconductor components in the past. Furthermore, the technology of restoring metal oxides through lasers is a source of environmentally friendly and economical technology for recycling metals and is expected to be used in the energy sector such as for solar cells and batteries in the future.

Ultraman Suit: Medical Polymer Material Responsible for Human Health

The polymer material used in the Ultraman Suit is economical and easy to process and can be widely used not only in flame retardant suits and space suits, but also in various other applications. Recently, polymer materials have been used in medicine. Medical polymers refer to materials used for diagnosing or treating diseases or replacing parts of the body that were damaged due to disease or accidents. They are widely used in the healthcare industry, from familiar contact lenses and medical devices such as artificial corneas to packaging, biomaterials, drug delivery, and more. Since medical polymer materials are used in the human body, stability is the most important factor; and they must maintain their functions for as long as possible without causing immune reactions. In addition, they must be processed into various forms to fit each individual's situation, so they are mainly made of resins,* fibers, elastic polymers,* and biodegradable plastics. In addition to polymers, medical materials include various metals, ceramics, and other materials; but polymers are the

most widely used because they have diverse compositions and can be easily processed into tubes, films, and fibers.


Recently, research is being conducted on biodegradable polymers that can be used for tissue regeneration or drug delivery within the body. In particular, natural polymers are receiving the most attention. Natural polymers refer to polymers extracted from plants or animals. They have the advantage of being less likely to cause an immune reaction in the body and of having excellent biocompatibility compared to other synthetic polymers. However, more research is needed before they can be used in practice due to the toxicity of natural polymers themselves. Currently, natural polymers such as chitosan* and collagen are being studied as medical materials for skin regeneration, cavity prevention, artificial bones, etc. As an interest in healthcare increases in aging societies around the world, medical polymers are emerging as the next promising player in the silver economy.* Medical polymers are materials that embody modern advanced technology, such as biocompatibility, sterilizability, and shape processability; and it is possible to expect the development of various case-based medical polymer materials so that more people can benefit from them.

*Resin: One of the filling materials used in dentistry, which, unlike materials such as gold or silver, has various colors, making it possible to perform aesthetic treatments that match the original color of the tooth depending on the color of the tooth.

*Elastic polymer: A polymer material with high elasticity that can be easily returned to its original state even when deformed by external forces.

*Chitosan: A substance processed to be suitable for consumption from the chitin component found in the shells of crustaceans and the bones of cephalopods.

*Silver economy: According to the European Commission, silver economy encompasses a unique cross-section of economic activities related to production, consumption and trade of goods and services relevant for older people aged 50 and over, both public and private, and including direct and indirect effects.

Sometimes people imagine a hero defeating the enemy and saving the Earth. They wish that the heroes from the comics would appear and save those in danger, but in reality, there is no Ultraman with shape-shifting abilities or a light saber. However, if one looks closely at one's surroundings, people are working hard to protect the Earth, even without having flashy superpowers. Instead of endlessly waiting for a hero to change the situation, humans are researching and creating our own Ultraman. Like Ultraman, the everyday Ultraman created by humans exists to ensure human happiness and safety, demonstrating an ideal vision for society alongside scientific and technological progress. The Argus hopes readers develop an interest in the "Ultraman" of the Earth present in our daily lives. 

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Forbidden but within Reach : Drug Issues in South Korea

By Kim Jun-hong

Staff Reporter of Social Section

“I had to work hard in real life, but I was busy fighting against auditory hallucinations. People around me were being threatened, and someone said he would come and kill me. I knew they were hallucinations, but my mind was imprisoned by them, making my life more and more difficult.”

Ban (38), a resident of Gyeonggi DARC, a drug addiction rehabilitation center, first tried drugs at the age of 20 at the recommendation of a senior at school. He suffered from severe auditory hallucinations as a result of taking Philopon* in large doses for a long time. Tired of battling against such hallucinations, he decided to quit drugs and succeeded in staying away from them for some time. However, in September 2022, after just one year, he started taking them again. No matter how severe the hallucinations had been, he had never surrendered voluntarily to the police in the past. But he could not stand the auditory hallucinations anymore, which soon led him to turn himself into the police.

Recently, drug-related incidents have been constantly reported across South Korea (hereafter Korea). Korea, once called a “drug-free country,” started to face drugs as a social problem that can no longer be ignored. Even if one does not have any thoughts regarding drugs, or even if there are no easily visible drug offenders, no one can be safe from drugs nowadays. There is a possibility of exposure to drugs anytime and anywhere, regardless of one’s intention. This is why young readers, who tend to visit places such as bars or clubs, where they can be exposed to drugs, need to be aware of such danger. The Argus aims to help readers remain vigilant about the emerging drug problems by raising awareness of drugs that might threaten everyone’s daily life.

*Philopon: A kind of drug that can cause toxic symptoms such as hallucinations in the case of misuse.



Problem 1

As Easy to Obtain as Cigarettes, even to Teenagers

Obtaining drugs has become as easy as obtaining cigarettes. All that is needed to buy drugs is Telegram*. In fact, on social media, drugs are referred to as various slang words. People can search Telegram for those slang words and contact the seller with just a few clicks. Nam (28), a resident of Gyeonggi DARC, also obtained drugs mainly through Telegram. “Previously, I kept getting drugs through my co-worker who first offered me drugs. But when he was caught by the police, it was no longer possible to do such transactions. But it did not matter. I was able to get enough drugs through Telegram.” Despite the absence of the broker who helped the drug deals for a long time, Nam was able to continue getting drugs through apps or social media. As it has become possible to purchase drugs via social media through a simple procedure, teenagers as well as twenty-year-olds can purchase drugs without any restrictions.



▲ Through Telegram, anyone can purchase drugs with just a few clicks using Telegram.

Drugs, which mainly have been bought and used by middle-aged adults, are now more available to young people. According to the monthly narcotics trend statistics released by the Supreme Prosecutor’s Office in March 2023, young people under the age of 30 accounted for the largest proportion of all drug offenders cracked down on in 2022, at 59.7 percent. What is even more troubling

is the fact that drugs are spreading like a trend among teenagers. According to the same statistics, 294 teenagers were arrested in 2022 for violating the Narcotics Control Act. The number of teenage drug offenders increased from 104 in 2018 to 241 in 2020, and then reached 309 in 2021. In March 2023, a 14-year-old middle school student was arrested by the police in Dongdaemun-gu, Seoul, for injecting Philopon. In addition to simply taking drugs, teenagers are often involved in drug-related crimes, such as participating in drug transactions. In fact, in December 2022, it was revealed that the operator of a drug sales room on Telegram was a high school student, which shocked society.

*Telegram: A free messenger program developed in 2013 that has been used for many illegal purposes in Korea.



Problem 2

Unexpected and Unwanted Access to Drugs

The reason why nobody is safe from the dangers of drugs is that there are cases where people are exposed to drugs against their will. These days, people who have never had any thoughts about drugs can easily be exposed to them. For many people, the way they turn to drugs is through others. Even if a person has no intention of taking drugs, he or she is often encouraged by close acquaintances or even a stranger. Shin (29), a resident of Gyeonggi DARC, was twice encouraged by others to take drugs. “When I was 20 years old, someone whom I did not know recommended drugs to me. He told me that it was something good, so I should give it a try. I did not feel particularly good at the time, so I did not look for more drugs. But three years later, when I was encouraged again by a friend, I became addicted.” In this way, through words such as “I

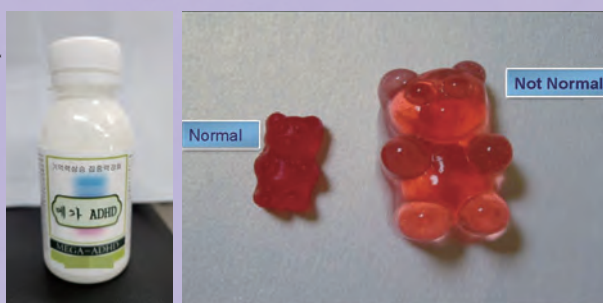


▲ Anyone can be exposed to drugs through recommendations.

will introduce you to something good,” or “It would not be a problem at all if you try it just once,” people are often tempted to fall for drugs.

People can reject drug recommendations to any degree, by clearly saying “No,” but what if there were drugs mixed inside the drink one drank unsuspectingly? What if one recovers consciousness and then finds a syringe stuck in their arm? No matter how alert one is, it would be difficult to avoid such situations. In this manner, people are often forced to take drugs without their knowledge. In April 2023, a gang handed out drinks mixed with Philopon to students around the academy district of Gangnam, Seoul. Several students complained of abnormal symptoms afterwards, without knowing the drinks contained drugs. The gang claimed to have developed drinks that were good for memory and concentration and used tasting events as an excuse to distribute such drinks to students. There are also drugs in the guise of sweet treats. At first glance, they look like bear-shaped jelly beans or colorful candies that everyone is familiar with, but they can also be drugs processed in the form of snacks. In fact, in October 2022, colorful candies found in bars in Itaewon, Seoul, were found to contain MDMA, a type of drug also referred to as “ecstasy.” In this way, even without an intention to do drugs, anyone can come into contact with drugs due to recommendations and various deceptions.

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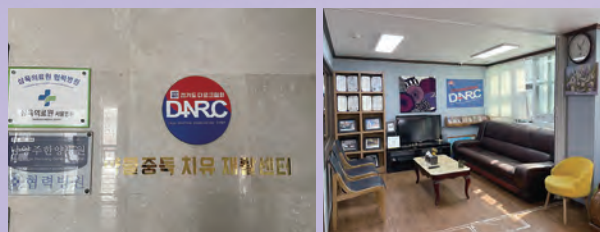
▲ There are lots of cases where drugs are in the guise of drinks and sweet treats.

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Problem 3

The Lack of Drug Treatment Facilities

The number of drug offenders is constantly increasing,



▲ Gyeonggi DARC helps drug addicts recover through long-term rehabilitation.

©Kim Jun-hong/The Argus

but there is little support for treatment and rehabilitation. There are 21 hospitals in Korea dedicated to treating drug offenders, but actual treatment is being held only in two of them: Incheon Chamsarang Hospital and Bugok National Hospital. From 2017 to 2021, a total of 1,280 drug-addicted patients were treated at 21 institutions in Korea, but nearly 64 percent of them were in Incheon Chamsarang Hospital and Bugok National Hospital. In addition to hospitals, there are only four Drug Addiction Rehabilitation Centers, also called DARC, in Korea that help drug addicts recover through rehabilitation. This is a very small number compared to Japan, where more than 80 DARCs are in operation. In Japan, DARCs are located even on remote islands, and many people are actively being rehabilitated and sent back to society.

There is a saying among addicts that only lucky people can complete the treatment through rehabilitation. It may be difficult to quit drugs voluntarily, but it is also difficult to find someone who can help the addicts get out of the grips of addiction. Shin, a resident of Gyeonggi DARC, said, “I could not quit on my own, so I tried to ask for help. However, since this issue is hard to confess even to my close friends or parents, it was hard for me to make up my mind to ask for help. After I made up my mind, I once again faced difficulty finding where to start the treatment because there was little information.” Another resident, Nam, also says that the process of entering the



▲ Compared to Korea, there are a lot of DARC centers in Japan, even in remote islands.

©Kim Jun-hong/The Argus

hospital was not smooth. “I wanted to visit Incheon Chamsarang Hospital for treatment, but I could not because no appointments were available. Later, I learned about DARC, and I was fortunate enough to be admitted to the last room available.” In the case of DARC, a maximum of 15 people can be accommodated. Because of the small number, many people turn back to drugs while staying on the waitlist.



Cause 1

Drugs Actively Shown in Media, and the Activation of Online Trade

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▲ Drugs appear frequently in the Netflix series “The Glory.”

In the Netflix series, “The Glory,” which recently became a worldwide craze, drugs appeared in every episode when Lee Sa-ra, one of the main characters, appeared in the story. From using a syringe to inject drugs into the arms to hallucinations and withdrawal symptoms, drugs are clearly depicted throughout the series.

The appearance of various dramas depicting drugs arouses the curiosity of young people and makes them susceptible to the lure of drugs. Also, the trend on social media, where drugs are regarded as a temporary aberration of celebrities rather than something criminal, stimulates the imitation mentality of adolescents. Due to the increasing exposure, doing drugs does not appear as shocking as before. Lee Han-duk, Director of Drug Addiction Rehabilitation Team of Korean Association Against Drug Abuse, says, “In addition to social media, expressions such as ‘drug’ and ‘addiction’ are increasingly used in everyday expressions. It has lowered the psychological hurdle to doing drugs among young people, which was treated as a taboo in the past.”

Meanwhile, COVID-19 has increased the use of social media and chat applications, making drugs easily accessible online. As the use of smartphones is ubiquitous and internet banking and international courier services have developed, Korea has created an environment where drugs can be easily accessed online. Especially for young people, social media has become a drug market. Lee said, “It was not long ago that Korea’s drug costs were the highest. The high price also means that the supply of drugs has been well controlled. These days, however, high market prices, combined with the active use of the internet, are causing drug suppliers to target Korea as a major market.” In other words, with the development of social media and the internet, Korea’s online environment has become a hotbed of drug trafficking.



Cause 2

Difficulties in Accurate Tracking and Verification

Are there not any proper ways to stop people from doing drugs in the first place? Handing drugs to others while holding them or connecting people with dealers after recommending drugs to them are all punishable offenses. In other words, the act of simply recommending drugs to others constitutes a crime. However, there are certainly limits in tracking down each of those cases one by one. Also, when caught sneaking drugs into another person’s drink in a club, one can be punished, too. Since it is against the will of others, it deserves an aggravated punishment. But in reality, such cases are difficult to pursue because it is not easy to prove whether a crime was committed. Attorney Ahn Ji-sung, Partner Attorney of Lawfirm



▲ When injected, GHB disappears from the body within a day, leaving no evidence.

Lawwin, explains the characteristics of GHB, a liquid form of a drug that is commonly used when injected into others. “Previously, crimes regarding forced intake of drugs were done using sleeping pills such as zolpidem. In those cases, the component remains in the body for a long time. But those in a liquid form do not. GHB does not stay in the body for long. It disappears from the body in less than a day.” If the victim loses memory at the time of the crime, he or she becomes suspicious only after the drug components have entirely left the body. Thus, even if the victim later notifies the police, it is difficult to prove the crime without no drug substances left in the body. Even if a statement is made based on memory, it is hard to determine whether it is accurate or not, and whether the drug intake was forced or not.

To make matters worse, there are no differentiated regulations for drug administration by others in Korea. Drug-related crimes in Korea are now punishable under the Narcotics Control Act. Since this is a law on the control of drugs, there is no provision discussing the aggravated penalties for the administration of drugs by others. In the case of forced injection, it does not simply end with injection but often leads to secondary crimes such as sexual offenses. Attorney Ahn said, “In such a case, it is difficult to punish it as a drug offense, but it can be punished by linking it to charges such as suspicion of injury or sexual offenses. In the case of injury, the injection of drugs is recognized as having caused an injury because drugs cause adverse reactions in the body.” In other words, the punishment for the administration of drugs by others takes a roundabout approach through the application of other laws. Due to the difficulty of proving wrongdoing, the act of administering drugs against one’s will is not easy to punish.



©Bio Space

▲ Punishment for drug administration by others is made through a roundabout approach in Korea.



Cause 3

Focused Only on Prevention Rather Than Treatment, and the Absence of Treatment Experts

There are some drug treatment facilities in Korea, but the main reason for their dysfunction is the lack of experts in the treatment of drug addiction. The treatment of patients with drug addiction is currently handled by psychiatrists, but few of them specialize in drug addiction, making it difficult to access proper treatment. Lim Sang-hyun, Director of Gyeonggi DARC, explains that Korea lacks data on drugs, so when treating drug addicts, many people refer to papers on alcoholism symptoms. “The mechanisms of alcohol and drugs may seem similar, but they are actually very different. In the case of alcoholism, it is necessary to be exposed to alcohol for a long time before it develops into a serious illness and causes brain problems. In the case of drugs, however, it can lead to a corresponding mental disorder after only using it once or twice.” In Korea, where the number of drug treatment specialists is significantly lower than in other countries, treatment is on the wrong track due to a lack of understanding of drug treatment. In addition to the lack of treatment knowledge, specialists are often reluctant to treat drug addicts due to difficulty in managing them. Drug addicts tend to be violent, and they are more likely to engage in abrupt behavior because they have difficulty controlling their emotions. Hospitals tend to be reluctant to treat them. Director Lim adds that taking care of one drug addict is way more difficult than dealing with 10 patients with a typical mental illness.

Meanwhile, Minister of Justice, Han Dong-hoon, announced at the first National Affairs Review Meeting in December 2022 that the government is preparing to expand drug addiction rehabilitation centers under the president’s order. Han explained that the government is planning to create more rehabilitation centers through the Ministry of Food and Drug Safety and increase the related budget. However, Director Lim says there is a contradiction in the statement, and he emphasizes the need to distinguish between the concepts of prevention and treatment in drugs.

© Maeil Business Newspaper



▲ The Ministry of Food and Drug Safety and Korean Association Against Drug Abuse works mainly for the prevention of drugs, which differs from treatment and rehabilitation.

given to doctors when it comes to treatment.” In fact, the privately run DARCs receive 400,000 won (US\$303) from residents as an admission fee. Otherwise, it is operated on its own sponsored money. Most of the money are spent on living, management and program operations, leaving just a little for the center itself. Adjunct professors come to the center to conduct treatment programs, free of charge, like volunteers. It is true that prevention is important, but treatment and rehabilitation are neglected in Korea despite its equal importance.

Solution 1

Blocking the Path to Enter into Drug Transactions

Ideally, the ultimate way to root out the dealings of drugs would be to shut down social media, which act as the main route of trafficking. However, blocking social media would be impossible, which is why people should keep an eye on participants in online transactions. Formerly, the general manager of the supply process was primarily involved in the trade, but today anyone can enter the drug sales

“The Ministry of Food and Drug Safety is more on the preventive side, and it is different in its characteristics from treatment and rehabilitation. Currently, the budget provided by the government is allocated to the Ministry of Food and Drug Safety and Korean Association Against Drug Abuse, which does work of a preventive nature, and there is nothing more than the support fund

process. Many of those who smuggle drugs, also called “jigaeggun*” as a slang, participate in the distribution of drugs through the

introduction of acquaintances, or merely because they are paid handsomely. Both the young and the middle-aged can join, with no exception. According to Attorney Ahn, there are many cases among young people who enter the drug distribution business through the recommendation of an acquaintance, with words like “If you run a simple errand, you can enjoy a free trip overseas.” In addition to this, there are cases of posting recruitment notices on internet cafes to find people through ads for simple, high-paying part-time jobs. Anyone can start working in drug distribution easily without even realizing it is a drug dealing.

While it is important to arrest offenders who actually do drugs themselves, it is also important to work on blocking such routes leading to drug transactions. Attorney Ahn says, “In the case of ‘jigaegguns’, they do not just keep transporting drugs. If one plays the role of a ‘jigaeggun’ a few times, he or she will be promoted to the role of surveilling, that is, monitoring and guiding people who carry drugs, which also leads to the difference in benefits. It is like joining a criminal organization.” More people seek drugs, and as a result, more people smuggle and sell drugs through various routes. This will eventually



▲ Drug transactions are held in various ways, even by hiding drugs under shoe insoles.

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▲ Cutting off the path of drug transactions is the primary step for blocking drug diffusion.

lead Korea to become an active marketplace for the drug trade. Perhaps the first step in breaking this vicious

cycle would be to cut off the path of drug transactions so that people can no longer engage in the trade and import of drugs. The increasing number of people involved in smuggling due to the rise of drug offenders should not be overlooked.

*jigaeggun: A person who carries things from place to place.



Solution 2

Increasing the Level of Punishment

It is necessary to establish relevant legal standards for drug administration held by others. In the United States, under the “Date Rape Drug Prohibition Act,” if one is caught using drugs and GHB, he or she will be sentenced to up to 20 years in prison. Simply possessing drugs is also punishable by three years’ imprisonment. This contrasts with Korea’s punishment level. In July 2022, a man was sentenced to two years and six months in prison and three years of probation for tricking his colleague into using ecstasy as a hangover relief in a bar in Gangnam, Seoul. The current roundabout punishment system, which imposes punishment by linking to other charges, such as injury or rape, is not enough to eradicate the current problem of forceful administration of drugs. There is a need to review legislation of such laws so that no more people are exposed to drugs against their will, and so that perpetrators cannot escape punishment just because of the difficulty of proving such crimes.

Meanwhile, participants in drug crimes are often caught one after the other, and in the process, those who recommend or arrange for the sale of drugs are often arrested. Therefore, it is necessary to recognize that mere recommendation is punishable. Even in the position of getting recommended to do drugs, it is important not to be indolent. Attorney Ahn is skeptical of those who intake drugs handed to them without any suspicion. “Those who are encouraged to take drugs, along with the saying that they will make them feel better, are punished for taking them despite the slight awareness of the fact that they are

actually drugs. However, even if they are punished, most of them get a suspended indictment because it is a simple intake.” In the case of simply intaking drugs for the first time, most of the cases are not prosecuted, so it is also necessary to raise the level of punishment in order to deter people from doing drugs.



©AspenRidge Recovery

▲ The level of punishment for drug use should be increased, even for simple intake cases.



Solution 3

Establishing a Proper Treatment System Based on Treatment and Rehabilitation

Korea lacks both hospitals and treatment specialists, and the fundamental methods of treating drug addiction need to undergo change. The current government’s treatment system involves detox treatment and prescription medication through hospital visits, along with counseling, if necessary. The problem is that patients do not enter a medical facility, but mainly go to the hospital for outpatient treatment. Director Lim says, “If a person is




©Kim Jun-hong/The Argus

▲ Director Lim of Gyeonggi DARC(R) emphasizes the importance of drug treatment through therapeutic rehabilitation.

briefly hospitalized, he or she will return home only after undergoing some detoxification and getting prescription, without any proper treatment achieved. It is just a brief change in the environment that discourages the desire for drugs, but as soon as one leaves the hospital, there is a good chance of relapse.” What is essential for correct treatment is the establishment of a therapeutic rehabilitation system through admission for a certain amount of time. It is important not only to receive treatment through a visit, but also to receive 24-hour care and aid to completely resist the temptation of drugs. In the case of Japan’s DARC centers, the admission period is one year and two months. According to the centers’ judgment, it takes at least one year and two months for all traces of drugs to disappear in the brain and lead to complete recovery. Drug addiction is not a problem that can be resolved in a short period of time, so it is necessary for patients to spend sufficient time in an admission facility.

The focus should not be simply on quitting drugs. What is most important is helping addicts imbue a right sense of values so that they can regain their way back to society. To this end, Director Lim emphasizes the need to pay attention to issues other than drugs. “People start taking drugs because of problems other than drugs; problems that occurred from one’s family, society, or even oneself. Rather than simply quitting drugs, it is important to find out what led the individual to fall prey to drugs and take a personalized approach.” If treatment is not done properly, drug addicts will continue to try smuggling in drugs and spreading drug use to others. All problems are solved through treatment, so addicts need our attention and support to rejoin society.

The residents of Gyeonggi DARC were ordinary people, no different from other young people or members of society. One dreamed of becoming a famous athlete, and another continued his studies at the center as a university student, just like the readers. Previously, when issues regarding drugs appeared on the news, the appearance of a drug offender from the “drug-free country” itself was surprising. But now anyone may find themselves using drugs. Perhaps Korea was deceived by the trap of a “drug-free country” and became complacent in that frame. Being accustomed to the ever-increasing issues related to drugs, and relaxing vigilance towards them will one day make drugs engulf the entire Korean society. It is important to always stay alert and to pay attention to those who are struggling in the swamp of drugs. 

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Here and Now



There was never any more inception than there is now,
Nor any more youth or age than there is now,
And will never be any more perfection than there is now,
Nor any more heaven or hell than there is now.

From Walt Whitman's
"Song of Myself" Section 3, "Leaves of Grass"



What Am I Passionate About?

Cho Eun

I have so many hobbies, and because I am versatile, it is hard to pick just one thing that I am passionate about. I am a hard worker, but also a good cook since food is my love language. Just recently, I fell in love with my morning routine with swimming classes, but I also enjoy the cozy nights with television shows, classic books like “Pride and Prejudice,” and sipping some beer. Above all, what I am most devoted to is the love of God, and I am so dedicated that I am even preparing for a missionary trip to Fiji for about three months. Please, wish me luck!

Lee Ju-won

I am hooked on cleaning and organizing. I am not naturally fastidious, but I try to keep my house clean. The thing I do every day to keep it clean is sweep the floors. If the floors are clean, I feel comfortable when I come inside the house. Also, good ventilation is necessary to make my mind feel awake in the morning. Now, the stress that I have to battle throughout the day does not matter much; I can simply escape anxiety by cleaning my house. Tidying up brings great happiness to my daily life.

Lee Jue-hyun

Recently, I have been focusing on establishing routines. I had never worried about my health before; however, since I have been getting sick frequently lately, I realized that I really need to take care of myself. I started by implementing some simple changes. For instance, I now make sure to work out at the end of the day and take a shower to wash away all the stress from the day. While these may seem like small steps, they have had a significant impact on my overall mood and productivity. I am excited to continue implementing new routines that will make my days better and help me maintain a healthy lifestyle.

Ryu Hyo-rin

I am addicted to cranberry juice these days. I tried it for the first time when I was about 17, and I did not like it at that time because it was too sour to me. After that, I swore never to drink it anymore. However, that promise was broken this April. I saw an advertisement for cranberry juice a few days ago and bought it for fun. Surprisingly, I felt refreshed the moment I drank it. After that, I started drinking three cups of cranberry juice a day, and I heard that it reduces fatigue. If you feel tired now, how about drinking a cup of cranberry juice starting today?



Kim Su-yeon

Recently, I have come to enjoy watching movies alone. When I feel down, I impulsively buy a movie ticket and go to the cinema by bus. Entering the theater, I do not care about reality and feel like I am in a vacuum, which make me feel stable. I have watched the movies “Soulmate” and “Everything Everywhere All at Once” in the last few weeks. I sometimes join movie discussion events. At such events, the director and actors talk about the storyline and characters of a movie. After that, the audience members share their reviews. Watching a movie with strangers and sharing similar emotions with them makes my daily life full of happiness.

Kim Jun-hong

What I love to do these days is drinking a can of beer at the end of the day. I am not a heavy drinker, but drinking a can of beer before sleep has become my own ritual to perfectly end a day. It is only on days when I struggle or feel sentimental that I pick up a can, as if to reward myself for my hard work. It feels as if all my worries are washed away. Recalling my recent trip to Sapporo, which was just like a dream on a winter day, I pour a can of beer into the beer glass I bought during that trip. My imagination transports me; I step out of my daily life and throw myself into the snow of Sapporo piled up as tall as I was. Beer is my closest buddy, which helps me dream and recharge myself. It is a bit hilarious that I feel like I am pretending to act as a “true” adult, though.

Park Gyeong-jin

I have been on a dessert kick lately. To be clear, I am not “eating” dessert, but I am “craving” dessert with every meal. I am tracking my daily calorie intake. Since desserts are as high as a meal in calories, I have to brush my teeth to quell my craving. Bread, ice cream, crisps, chocolate... After having anything salty and spicy, you will find me reaching for these on automatic reflex. But I am proud of my self-control and have not had dessert in a while... except yesterday!

Park Kun-ha

These days, I am into economics. After serving as The Argus’s editor-in-chief in the first semester of 2022, I lost my way. (I agree that my improved writing skills from working for The Argus would definitely pave way for my future, but I am not interested in being a reporter or a journalist.) With an indefinite plan, I entered the student economic association, KUSEA (Korea University Students Economic Association), because I thought humans are often detached from economics. I met and conversed with many people from different majors. As a result, I became determined to work in the trading industry. Therefore, I am obsessed with studying economics now.

Yang Yu-min

Lately I have lost myself in Kuromi, a Japanese character. Kuromi and I have many similarities. Kuromi hates scary things, such as ghosts, and really likes writing diary entries and reading romance novels as I do. Although she has a hot-tempered personality, Kuromi’s silliness and cuteness are always endearing. As a result, my room is full of Kuromi items. I hope people all over the world discover her charm and fall in love with her.





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