"A TIGER'S COMING DOWN": GUGAK IN THE METAVERSE

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Abstract

In 2021, the South Korean government launched its Digital New Deal with the aim of transforming society through science and technology and, later that year, announced the creation of the National Metaverse Alliance, charged with building a unified national virtual reality (VR) and augmented reality (AR) platform. As 5G technology becomes the norm in South Korea, we may soon find the proscenium stage replaced by immersive digital experiences that transcend time and space in the "metaverse." This article describes some of the points at which *gugak* is currently intersecting with emerging technologies and contemplates the future effects of these encounters on the country's intangible heritage and traditional music aesthetics.

Keywords

Korea, Gugak, Joseon Pop, K-Heung, Leenalchi.

INTRODUCTION

In the 2018 PyeongChang Winter Olympics opening ceremony, five children arrived at a glittering "Gate to the Future at the end of the River of Time." The light emanating from the gate lengthens, illuminating a new world in which "everyone communicates and interacts freely with one another." As the media guide explains, "when the children step [through] the Gate to the Future, the people onstage stand in a circle with one ray of light drawing an image of a person with a smile: a statement that the world of new technology belongs to people" (PyeongChang Olympic Winter Games Opening Ceremony, 2018). Once through the gate, the children see the future Republic of Korea—a high-tech utopia where their dreams are realized: "Puri has become a doctor, Nuri an artificial intelligence specialist, Ara a K-pop star, Haenarae an urban simulation expert, and Bichae a Hangeul teacher and holographic specialist" (PyeongChang Winter Olympics Opening Ceremony, 2018). In 2018, few young people dreamed of becoming a *gugak*² star.

Four years into this imagined high-tech future and three years into the very real coronavirus pandemic, the metaverse now waits at the end of the River of Time (as we know it), and new *gugak* genres and renditions are being conceived and popularized every day, as modern musical influences and emerging technologies descend on Korea's old musical traditions. As described in the lyrics of the Joseon Pop group Leenalchi's hit song, "A Tiger Is Coming" (Arirang K-Pop, 2020), "scarlet mouth wide open, shrill rumbling sound as if the sky had collapsed and the earth had been ripped out ... a tiger is coming down, a tiger is coming. A beast is coming down through the deep valley in the pine woods" (Elkan, 2020).

On January 20, 2021, the South Korean government launched a "Digital New Deal" with the aim of transforming society through science and technology. A few months later, in May, it announced the creation of the "National Metaverse Alliance," which it charged with building a unified national VR

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² 國樂, lit. "National music," i.e., traditional Korean music.

and AR³ platform (Sharwood, 2021). Later that year, on October 29, Mark Zuckerberg announced the rebranding of *Facebook* to *Meta*, heralding the oncoming transition of much of our daily lives into the "metaverse"—the digital universe currently under construction by not only Facebook/Meta, but Apple, Google/Alphabet, Epic, Unity, Roblox, NVIDIA Corp., Tencent, NetEase, TikTok/Douyin/ByteDance, Zepto, Naver, Daum/Kakao, WYSIWYG, Com2uS, Netmarble, Studio Dragon, and Nreal, to name a few. As a result, if and when the pandemic loosens its grip on South Korea, we can expect to emerge into a world transformed by all manner of (extended reality) XR-simulated experiences⁴—a world where our material realities will increasingly migrate into virtual and other digital realms, with digitized possessions owned in the form of nonfungible tokens (NFTs) that are traded through cryptocurrencies pegged to various distributed database ledgers or blockchains.

In the winter of 2019, I had my first experience with VR goggles (Yonhap News Agency, 2021a)⁵ using Oculus Quest 1; later, in early 2020, I tried Oculus Quest 2. Both headsets were introduced to me by an American friend, as neither was yet sold in Korea.⁶ Oculus 2 would formally arrive on the peninsula later, coinciding with the announcement of South Korea's investment of 202.4 billion *won* (\$181.8 million) in VR technology and devices to support the growth of the country's digital-content industry (Yonhap News Agency, 2021a).

My first Oculus 2 experience blew my mind. I played the musical rhythm game Beat Saber (which Zuckerberg claimed, in his October 29, 2021 speech, already had 100 million-plus players),⁷ painted in 3D, went deep-sea diving, sat with Elton John at his piano as the crowd cheered, jumped off buildings, flew around mountains, drove off a cliff, and watched Netflix—sitting on a couch next to a crackling fireplace, in a fancy cabin located at a luxurious ski resort on a snowy evening. After I removed the goggles, I began to think about the possibilities this technology might hold for engaging Koreans with the country's traditional arts, and soon, after my out-of-body experience, I gave a talk

³ An enhanced version of the physical, real-world reality of which elements are superimposed by computer-generated or extracted real-world sensory input such as sound, video, graphics, or haptics (Schueffel, 2017). *The Concise Fintech Compendium*, pp. 2-3). A popular example is the digital Pokemon game.

[&]quot;Mixed Reality" (MR) generally refers to hybrids of augmented reality and virtual reality.

⁴ Extended reality (XR) is a generic term referring to all real-and-virtual combined environments and human–machine interactions generated by computer technology and wearables, including VR, AR, and MR.

⁵ AR/VR technology makes use of sensory devices to either virtually modify a user's environment (AR) or completely immerse them in a simulated environment (VR). Virtual reality devices typically consist of specially designed headsets that offer complete visual immersion into a simulated environment, whereas augmented reality relies on headsets that add virtual elements to a user's actual environment. In 2020, global sales of AR/VR headsets were projected to reach 5.5 million units. Sony's PlayStation VR and Facebook's Oculus 2 VR headsets represent most of the VR headset products being sold on the market today (AR and VR market size worldwide from 2016 to 2024, 2020). Korea's top wireless carrier, SK Telecom Co., recently began selling Oculus Quest 2, whereas LG Uplus Corp. partnered with Chinese mixed reality developer Nreal last year to release AR glasses. (Yonhap News Agency, 2021a).

⁶ Although Facebook had acquired Oculus in 2014, it was not until 2016 that Oculus applied to Korean regulators to market the original PC-based headset Oculus Rift (Kim Young-won, 2016). Either Facebook withdrew the application, or the government refused it, as neither Oculus Rift, its follow-up Oculus Rift S, nor Oculus Quest 1 ever made it to the Korean market. In late 2019, SK Telecom established a partnership with Facebook to sell its Oculus Go as hardware for SK's Jump VR services (Hamilton, 2020). When Oculus Quest 2 arrived in February of 2021 (like Oculus Go, also in partnership with SK Telecom Co.), it was only the second Oculus headset to come to the peninsula and priced at around ₩414,000 or \$370, at least 10 times more than the less powerful Samsung Gear. Oculus Quest 2 differs from the Samsung Gear VR in that it has a 4° wider field of view (100° vs 96°), has a gyroscope, has position tracking, can track 360° head movement, has an adjustable IPD, has a socket for a 3.5 mm audio jack, a game controller is included, and it has an accelerometer.

⁷ In 2019, the market size of gaming in South Korea was around 15.6 trillion South Korean *won* (\$13.2 billion; Jobst, 2022). A tenth of this was VR and AR gaming, which went from four trillion *won* (\$3.4 billion) to 5.7 trillion *won* (\$4.9 billion) in 2020 alone. The overall market value of gaming is estimated to grow to 19.9 trillion *won* in 2022. (Jobst, 2021b). The overall market value of gaming is estimated to grow to 19.9 trillion *won* in 2022⁷ and up to 23.46 trillion won in 2023. (Jobst, N., 2022). Mixed reality (MR) gaming is certain to make up a growing percentage of that expansion.

to the music faculty at Seoul National University in the fall of 2020, in which I suggested, it was time Korean traditional instruments/music entered this space. As I soon found out, many in South Korea's traditional arts community were already working hard toward that end.

When COVID-19 arrived in Korea in February 2020 and many of our day-to-day activities began to move online, high-tech platforms featuring Korea's traditional instruments and music were "shovel ready," with the National Gugak Center releasing a series of videos in Korean and English on *YouTube* on the Gugak TV channel (National Gugak Center. n.d.) titled "Daily *Gugak*: Fight COVID Online Concerts," with uplifting messages of strength and perseverance set against a backdrop of traditional "healing music" performances. More remarkably, on July 1st of that year, the National Gugak Center released 63 360° VR videos that could be viewed with VR goggles or on *YouTube* through a digital-streaming device. Although these video channels and VR concerts had not been planned, funded, institutionalized, shot, or edited in *response* to COVID-19, the timing of their release proved auspicious, as people retreated to their homes and into online worlds. By the summer of 2020, thanks to multidimensional 3D/8K video/sound recording technologies, anyone with a VR headset was able to step on stage and stroll among the young National Gugak Center performers who played in the productions.

In July 2021, South Korea's government launched its revised and expanded "Digital New Deal 2.0," with the vision of "becoming a leading country through great transformation to a first-mover economy, low-carbon economy, and inclusive society" (Government of the Republic of Korea, 2021: 15). The Digital New Deals were conceived as umbrella plans to tackle COVID-19 and start "a great transformation through science and technology innovation," including continued expansion of South Korea's public WiFi networks "to narrow the digital divide" (Melnick, 2021). Digital New Deal 1.0 allocated 58.2 trillion won (\$50 billion) in key tech industries to create more than 900,000 jobs by 2025, (Yonhap News Agency, 2021a); the 2.0 version increased the total budget that included local government and private sector funds from 160 trillion won (New Deal 1.0) to 220 trillion won (up by 60 trillion won or around \$182.6 billion) by 2025. Accordingly, under the Digital New Deal, between 2020 and 2025, South Korea's tech workforce is expected to increase from 1.9 million to 2.5 million (Government of the Republic of Korea, 2021: 16). Digital New Deal 2.0 also explicitly adds the policy to "develop hyper-connected industries including the metaverse" (specifically building "open metaverse platforms and support [for the] creation of metaverse contents..."), for which it set aside 2.6 trillion won (Government of the Republic of Korea, 2021: 16, 18). On November 10, 2021, Seoul announced it would invest 3.9 billion won (\$3.3 million) of New Deal money to become "the first major city government to enter the metaverse" (Squires, 2021).

Put together with the proliferation of 5G Internet speeds across the country (Samsung, Verizon, Qualcomm set a new record of 711 Mbps upload speed which is around a gigabyte every 10 seconds in October 2021; Cho Jeehyun, 2021), we may be seeing the age of the proscenium stage brought to an end or, at the very least, augmented, by virtual and hybrid platforms that offer better views and sound without leaving the couch or putting oneself at risk for infection.

In this paper, I observe some of the ways *gugak* is beginning to express itself on new high-tech platforms and contemplate what these new tools may mean for Korean traditional music over the coming years.

PIONEERING ONLINE VIDEO AND VR TRADITIONAL ARTS

For musicians around the world unaffiliated with an institution, 2020 was a harrowing time during which many struggled to eat and pay rent. Those with institutional backing and access to online video-production equipment fared better. Live concerts were canceled *en masse*, at the same time, interest grew in newly available digital performances. In the realm of non*gugak*-affiliated pop, the Record Label Industry Association of Korea (RLIAK) reported the cancellation of 211 concerts in just the

three months between February and April, resulting in losses of almost 63.32 billion *won* (\$51.6 million) in concert-related revenue (Kwon Yae-rim, 2020).

We do not have these figures for the *gugak* industry at large, but we might take the National Gugak Center's numbers as a microcosm. In addition to the Seoul campus, the Center comprises "local" Gugak centers, including the National "Folk" Gugak Center in Namwon, North Jeolla Province, the National Namdo Gugak Center in Jindo, South Jeolla Province, and the Busan National Gugak Center in Busan. The average number of gugak performances per year across these locations was 250 to 300. These dropped to 167 performances altogether—54 stage performances and 113 online performances (Lee Chan-young, 2021), which included 103 nongovernment-affiliated performances at the Gugak Center's venues: 88 recorded/streamed in Seoul, three in Namwon, 11 in Jindo, and one in Busan (Seo Inhwa & Clark, 2021). By the end of 2020, the first year of COVID-19, corporate funding in South Korea had dropped 42.9% for classical music performances, 44.6% for musicals, and 50.1% for dance, compared to 2019. At the same time, private financial backing for gugak and traditional arts went up by 5.8% and the government began making significant investments in online gugak (Im Eun-byel, 2021a), "for the nation." Although concert numbers went down, the number of people exposed to various gugak performances increased. In 2019, the number of visitors to concerts at the National Gugak Center was under 200,000, but, in 2020, online performances were accessed by more than one million unique viewers (Lee Chan-young, 2021). Much of this content streamed on YouTube and Naver and, through these platforms, on Facebook. Those with international aspirations included BandCamp.

Gugak and *gugak*-related online concert videos use three general levels of technology. The first is familiar—simply moving a live traditional proscenium performance in front of a video camera. With Neilsen ratings hovering around 1.7% (The Neilsen Company, 2022), KBS's *Gugak Hanmadang* variety show, the longest-running (and for most of its history, only) Korean traditional music program on Korean television has been doing this since 1990—for 1,390 Saturdays as on February 5, 2022. Its production values may have improved over time—digital graphics and HD have been added—but less technological innovation is found in this tried-and-true format. Most of the concerts that have gone online during the pandemic have involved this kind of format, including the new K-music/Joseon Pop "*gugak* survival" shows on cable. It is familiar to performer (old masters in particular), camera person, production crew, and viewers, and the productions can be spun up relatively quickly and economically. Pandemic or not, students and those in the Intangible Cultural Asset System still need to fulfill their required concert quotas, and these accessible productions, which can now even be shot on a smart phone, provide a way to go before an audience, be it on national television or TikTok. For simplicity, I include rudimentary 3D videos of traditional proscenium and outside/*pan* performances in this first category.

The second type of online performance being produced today resembles an MTV-style music video, most often containing added visual, and sometimes audio, elements. Examples include the "Gugak Artist Lab," "Gugak in (人)," and "Hope ON" (희망[希望]ON) projects.

The third category involves the full use of the latest technology to create an immersive, and sometimes interactive, experience—projects like Won II's work with the Gyeonggi Sinawi Orchestra and Leenalchi's 3D XR concert "Sugungga: Catch the Rabbit," a rendering of the *pansori* narrative "Song of the Underwater Palace" (水宮歌).

International collaborations on new music/electro/acoustic concerts that include *gugak* instruments, such as, the concerts of Yoo Hong, Kim Jin Hi, and Trevor New, have used a hybrid of the first and third types of productions described above.

In addition to the full concerts that were moved online, the Center created several separately branded music-video series. The "Hope ON" (희망 ON) playlist includes 32 videos performed in the Center's halls of *parts* of concerts of traditional repertoire, each around 5–10 minutes long—a short *sanjo* or

an aria from the *pansori* (narrative story singing) repertoire. The playlist premiered on May 1, 2020 and was last updated on October 29, 2020 (Hope ON, 2020).

Another video project of the National Gugak Center, sponsored by the Ministry of Culture, Sports and Tourism, was the "Gugak *in* (Λ)" project, (Gugak in playlist 2021, 2021) which began in February of 2021 and ran through December of 2021. The project's aim was to provide 3 to 7 million *won* (around \$2,500-\$6,000) in financial support for artistic activities—specifically, for performance videos by traditional artists who had lost concerts "due to the corona situation" (Ministry of Culture, Sports and Tourism, 2021). With these funds, actual MTV-style "music videos" lasting 5–35 minutes were produced instead of videos of live concerts. As on December 20, 2021, 63 videos were made for the 2021 series. The project was renewed, with applications for a "2022 Gugak in Λ project" [$\exists \mathfrak{PQ} \equiv \Xi \ end \in$] accepted from December 15–17, 2021 (National Gugak Center, n.d.).

Next to the "Gugak *in*" project, the 2021 Gugak Artist Lab project (2021 국악아티스트 랩), also created by the National Gugak Center under the Ministry of Culture, Sports and Tourism, aimed "to promote creative activities <u>based on</u> (emphasis added by the author) traditional art in the online space." From April 16 to 20, "[a]ll genres (traditional, fusion, creation, etc.) based on *gugak*" were accepted, with "the elements of *gugak* (content, acoustic, etc.) required to be included." Applicants had to be 18 (19 in Korean years) and should have *majored in Korean music*. Winners received production support (up to 10 million *won* per individual/team in equipment, video, and technical education support, and so on.), public relations support, posting on the National Gugak Center's *YouTube* channel (Gugak Artist Lab [국악 아티스트 랩], 2021a), Naver TV, and distribution to overseas cultural centers, as well as "excellent work MCN (Multi-Channel Network)-related business matching support and overseas performance market entry support" (Ibid). In the end, 28 new videos were created and later revealed between December 13 and 17, 2021 (Gugak Artist Lab [국악 아티스트 랩], 2021b).

The very first set of videos to be produced after COVID-19 that arrived in Korea, however, was the "Daily *Gugak* —Fighting COVID Online Concerts" [코로나 19 극복 온라인 콘서트 '일일국악'], and began on March 17, 2020. On April 29, 2020, all concerts were subtiled in English. These were not really concerts but short music videos on each of the genres housed in the National Gugak Center, introduced by a director or head musician who first urged viewers to work together to combat COVID, wear masks, wash hands, and socially distance, then proceeded to extend the sounds of their "healing" and ritual work to help everyone sequestered at home feel better. The list of works included everything from court pieces that had once brought the Joseon Dynasty (1392-1897) auspicious luck, to the "Sparrow's Travelogue" aria from the *pansori* narrative *Song of Heungbo*, invoking fond memories of travel, to songs with roots in shamanic exorcism—such as the very first video in the series, "Namdo *Sinawi*," a genre which seeks to expel evil spirits from the land. Although some videos were beautifully shot in 4K with multiple cameras on booms, there was less revolutionary about them, except the speed with which they came out—almost a video a day during the month of March 2020.

The most remarkable and uniquely Korean aspect of the series were the high production quality and speed of the releases, neither of which would have been possible had the digital infrastructure was not already in place. In a survey published by *statista.com*, conducted in April and May of 2020, around 45.3% of South Korean respondents said they had experienced their first virtual concert (regardless of genre) during the previous two months. Around 54.7% stated that their online video consumption had increased overall during that time (Jobst, 2021b).

READY COUNTRY ONE: FROM 2D TO 3D

Although the above streaming resources were impressive, what really put South Korea on the map in the early days of the pandemic when it came to the traditional performing arts, was the country's VR

advancements. In February of 2019, the Japanese company Docomo created the "world's first 8K⁸ 3D virtual reality system" for live 5G streaming at 60 frames per second (FPS).⁹ Just a year later, on July 1, 2020, the National Gugak Center had 60 examples of its National Gugak Center-affiliated works and genres played by its employees ready to enter the 3D VR space. The National Gugak Center boasted that their effort marked the first known VR product in the world featuring traditional performing arts (Kim Hee-sun & Park Yu-sung, 2020: 1).

This achievement was largely made possible by the Center's work, beginning in 2019, on an experiential interactive exhibit based on Digilog technology for which VR, AR, holographic, and projection-mapping technologies (together known as "mixed reality") were required. According to Kim Hee-sun, Director of the Research Center at the National Gugak Center at the time, the idea was for these advanced technologies to "be used to expand the base of Korean traditional music, [leading] to the globalization, popularization, [integration into] daily life, and industrialization of Korean traditional music"—the mission of the National Gugak Center and the Museum of Traditional Music. The Center was working under an Innovative Growth Foundation grant for their "Cultural Data Construction Project" for new technology support for Korean cultural information (Kim Hee-sun & Park Yu-sung, 2020: 5).

The first filming took place on November 5, 2019 and included the fan dance, *sogo* (small frame drum) dance, *janggo* (hourglass drum) dance, and *Cheoyongmu* or "Cheoyong's Dance," a dance to ward off the Smallpox Virus God from sleeping with the protagonist's wife (Ibid). Less did the filmmakers know what was coming in three months' time.

Viewers can experience these performances in 3D from a 2D perspective on a computer or smart phone by 'looking around' with the 360° hand function (National Gugak Center, 2022). For those with VR goggles, one may stand in the middle of the performers and turn to engage with any one of them. (They do not react—yet.)

In the Center's 3D educational videos, like "Jindo Arirang" (National Gugak Center, 2020), the names of the instruments are labeled in Korean as each is played individually and then together, as viewers may learn how each looked and sounded. One may step closer and, for instance, sit next to the *gayageum* player or zoom in on her hands (by moving your head) in 3D to get a closeup view of her technique. The players are young employees of the Center and not Important Intangible Human Cultural Assets, which makes the videos good as educational introductions to *gugak*, but not as pedagogical tools for advanced students and practitioners.

ONLINE LEARNING: EDTECH TOOLS AND APPS

Elsewhere on the educational front, in January of 2021, the National Theater of Korea moved its Korean Traditional Performing Arts Academy to *YouTube*. The "Let's Gugak!" (I, II) site's English playlist (National Theater of Korea [국립극장], 2021) was designed to educate foreigners in Korea interested in traditional Korean culture without exposing them to the novel coronavirus. A new class was posted online every Thursday, beginning on March 18, 2021, for nine weeks in each session (I, II), with English, Chinese, and Japanese subtitles and practice videos that allowed viewers to rehearse dance, vocals, and rhythm (Im Eun-byel, 2021b). The National Gugak Center also experienced a surge in the number of visitors accessing the e-Korean Music Academy, which it had started in 2007

⁸ 8K indicates 7680×2160 pixels per square inch, the highest resolution available in 2019 when the NGC recorded its videos.

⁹ VR headsets like the HR Reverb G2, HTC Vive Cosmos, Vive Pro, and Valve Index, run \$600 or more, but the current most popular headset, Oculus 2, now costs about \$300, with Facebook/Meta's new sunglasses-style VR headset, produced in partnership with Ray Ban Stories, running just under \$300.

and upgraded during the pandemic. Between 2019 and April 2020, the site saw an increase of 27,500 users which is almost a five-fold increase.¹⁰ (Lee Chan-young, 2021).

Korean institutions have also been making *gugak*-related apps, although not all have been updated regularly. The "Digital *Gugak* Instrument Source and App Development Project" at the Center for Arts & Technologies at Seoul National University (CATSNU, funded by the Korea Creative Content Agency) made a series of individual instrument apps between 2005 and 2015 under the "Gugak" (with an "°" over the second g) brand (Lee Ji-hyun, 2018). On the iOS App Store, CATSNU describes itself as "an organization that creates advanced art content by converging art with science. We aim to build a creative research environment focusing on education and study. We also conduct research in digital media and electroacoustic music. Moreover, we are continuously challenging ourselves to explore newer art areas such as developing virtual Korean instruments and mobile applications, and interactive hybrid performances using sensor application." Referring to the app CATSNU created for the SNU Entrepreneurship Center [서울대학교 창업지원단] (SNU Entrepreneurship Center, 2015-2022), Apple's monitors note as it appeared when installing the application says "[t]he developer has not provided details about its privacy practices and handling of data to Apple. The developer will be required to provide privacy details when they submit their next app update." The update never came and it has not been updated in iOS since 2015 as far as I am informed.

CATSNU also came out with "*Sori*," Korean instrument sampler sets for composer and sampling software (in EXS24, KONTAKT, Live Sampler formats) as well as *gugak* fonts and symbols. The most significant thing CATSNU did for *gugak* was perhaps provide its sound sample library of Korean traditional instruments to BTS for their use on the album *IDOL* in 2018. The last update of this software¹¹ was April 2015.

In "Gugak BEAT," a game designed in 2019 by JH Park with music by Choi Ansik and English translations by Hwang Heejeong, players could easily combine rhythm patterns with various Korean traditional instruments, including piano, keyboard, and drum machine, by simply bringing an instrument icon to an empty circle. The drum machine feature made it possible to include hip-hop and house beats. The developers wrote in the application that you "can combine Korean traditional instruments and music to suit current trends." Like CATSNU's apps, it failed to "provide details about its privacy practices and handling of data" and has since disappeared from the iOS App store (SNU Entrepreneurship Center, 2015-2022).

My personal experiences show two applications that have been updated. Those are Acoustic World's "Jangdan [rhythm cycle] Metronome" (recorded/data input Hyeonhee Park, sold by Jae Rock Park) and "Our Ensemble." Although the Jangdan Metronome was created 10 years ago, it is up to date (v 2.2) and ready for Apple's M1 chip and iOS13. "Our Ensemble" (우리앙상블, or "Uang" 우앙), developed by the Ministry of Culture, Sports and Tourism and the Traditional Performing Arts Promotion Foundation (KOTPA 전통공연예술진흥재단, which is housed in the Gugak Education Center of the National Gugak Center) to expand educational opportunities for traditional arts majors, debuted in 2019, adding videos in 2020. It was most recently updated in September 2021. "Our Ensemble"/"Uang" won the Mobile Award Korea 2019 Public Service Sector Grand Prize ('모바일 어워드 코리아 2019 공공서비스 부문 대상) for providing high-quality content through co-organization with the National Gugak Center. This application "allows you to practice Korean traditional music [60 pieces are provided] with the best performers anytime, anywhere" (Traditional Performing Arts Promotion Foundation, 2020: 1). The app provides most of the rhythm cycles used in sanjo in "original form" (기본형), in three variations (변주형), and in combination (기본형과 변조형), each for a duration of around 15 minutes. Unlike the Jangdan Metronome, it cannot be adjusted for BPS (beats per second) tempo, but it can be sped up and slowed down. In this player's opinion, although not yet

¹⁰ From 7,500 in 2019 to 35,000 in April 2020.

¹¹ Currently downloadable at Seoul National University Center for Arts & Technologies. "Gugak." http://en.catsnu.com/Project/GugakVSTi.aspx.

ideal, it works better as a rhythmic accompaniment for sanjo practice, but the less frequently used fast *hwimori* and 10-beat *eonmori* patterns, which are used only in a few "schools" of *sanjo*, are missing from the app's jangdan list. For dancers and folk singers, it instead includes the frequently used salpuri (shamanic dance for releasing bad spirits), seungmu (the monk's dance), and semachi (used especially for *Arirang* variants) rhythm patterns, which are not included in instrumental *sanjo*. As on January 28, 2022, the app is providing scores to go with the recorded content. What is particularly interesting for students who have not been able to rehearse together during the pandemic, especially those of instrumental court music and ritual traditions, is that the app provides much of the repertoire with which one can practice, minus your own instrument (or with only your own instrument or whatever combination you choose in the menu). The app functions as a kind of instrumental ensemble karaoke (空桶) machine. Among folk music traditions, aside from the rhythm patterns, only southwestern Jeolla-style sanjo¹² ensemble, Namdo gutgeori,¹³, and Yukjabaegi¹⁴ (which can be used by singers) are included (han and all). The app seems geared toward exams, primarily for instrumentalists and also for a few dancers and singers. It includes links to 20 instructional YouTube video lectures-primarily theory and historical sites-by experts in the field of Korean traditional music education.

CLUBHOUSE AND SOCIAL AUDIO

In addition to the *gugak*-specific apps, some interesting new audio-only social media spaces have opened since the arrival of COVID-19, like Kakao's *mm* [음] (*https://mm.xyz*, released on June 7, 2021, for both iOS and Android users without invitation) and *Clubhouse*, "The Social Audio App" (released in April 2020 initially only for iOS users by invitation, is now open to Android users; Clubhouse, n.d.). *Gugak* musicians have started to use *Clubhouse* both as a performance space and teaching tool. On October 15, 2021, the platform released its locally spatialized "music mode" (Harris, 2021) for iOS on top of its "high," "normal," and "low" bandwidth modes, thereby expanding the ability of artists to collaborate on live shows and broadcast with, as they say on their website, "high quality and great sound stereo" to "improve the live experience when introducing new songs or hosting a jam session with friends." By improving sound quality, *Clubhouse* is seeking to "enhance engagement as it allows artists from any part of the world to collaborate and monetize their live shows on the audio platform" (WeRSM, 2021). Music mode does not solve all latency problems (the delay between creating a sound and hearing it), but it does improve sound quality.

Tae-Gap YANG (baritone/conductor, New England Conservatory) started the *club YeSuDa* (예수다) "Korean and Global Artists Meet Up," where, for 12 hours a day (supported by the accompanying websites in English and Korean, en.yesuda.com, yesuda.com, and Instagram @Ye.Su.Da), he facilitates arts chats and live performances that include *gugak*. The *club* had 3,600 members as on January 19, 2022.

In addition to Tae-Gap Yang, "classical" *jeongga* (\mathbb{E}) singer Moon Hyun has been running the club *Korea Traditional Songs* since 2021. Currently with 421 members, Moon introduces a new song in a different genre through a representative of that genre every Monday night in Korean and English, playing music, sending a score to the participants via Kakao Open Chat room ("all about Korean songs [*gugak*]"), and then conducting a call and response singing lesson over the app.

¹² The so-called *scattered melodies* (or modes) for solo melodic instrument and drum accompaniment—here in ensemble form.

¹³ The *gutgeori* rhythm pattern used in *pungryu* and *samhyeonyukgak* aristocratic ensemble music in the Southwest provinces, is also used as an accompaniment for folk dances such as Monk's Dance of the Southern Provinces [僧舞] and the Sword Dance (劍舞).

¹⁴ A song of longing and abandonment from the *seonsori* ("standing songs") repertoire of the *Namdo Japga* "Miscellaneous Songs of the southern provinces" repertoire.

Students, in particular, like not having to show their faces and spaces. Although *Clubhouse* cannot compete with *YouTube* or *TikTok* when it comes to spectacle, it does serve as a fresh *intimate* platform where musicians can also "monetize their live shows" whereas not having to come up with the financial capital required to create a *visual* extravaganza. Facebook (Live Audio Rooms and podcasts; Mengus & Carman, 2021), Twitter (Spaces), and Spotify (Greenroom; Carman, 2021), among others, have since all released their own social audio platforms.

THE DECENTRALIZED DIGITAL MARKETPLACE: NFTs¹⁵

Another way *gugak* musicians are starting to monetize their work is by turning their digital art, including recordings and related audio, video, photos, and tickets, into currency through NFTs.¹⁶ NFTs allow people to buy and sell digital artwork and keep a record of each transaction on a public blockchain. ¹⁷ The idea is to create scarcity (through nonfungibility) for digital goods (which otherwise can be infinitely digitally reproduced on the "giant copy machine" of the Internet), so that they can be owned like physical "artist proofs" (the first pull of a series of prints; Smee, 2021).

In early 2021, when it came to digitizing their products, the Korean recording industry was still thinking in terms of digital recordings, event tickets, membership tokens, and exclusive experiences like meeting the band.¹⁸ Later, in July 2021, the multinational entertainment and record label conglomerate JYP Entertainment Corporation unveiled plans to launch an NFT platform for K-pop artists in partnership with Dunamu, the operator of South Korean cryptocurrency exchange Upbit (Yeo, Gladys, 2021). BTS's parent company HYBE announced on November 5, 2021, that it would buy a 2.5% stake in Dunamu and issued 2.3 million shares, giving Dunamu a 5.6% stake in HYBE. At that time, HYBE was reportedly contemplating offering digital photocards of BTS, TXT, and Enhypen idols as NFTs (Yeo, Amanda, 2021).

¹⁷ Programmers are now busy adapting popular creative platforms to be compatible with NFTs. Adobe Photoshop, for instance, announced in November 2021 that it will build NFT production into its software to complement its "content authenticity initiative" (CAI), which seeks to address "misinformation through digital content provenance"—in other words, to ensure the authenticity not only of information digital media users consume but of the NFTs they purchase.

¹⁵ NFTs entered the public consciousness in early 2021 when the 225-year-old art auction house Christie's auctioned a digital artwork by Beeple, also known as Mike Winkelmann—a collage of his first 5,000 days of "a sketch a day" forming a square of 21,069 x 21,069 pixels, for \$69,346,250. (Kastrenakes, 2021). On November 9, Christie's auctioned a new, three-dimensional video sculpture by Beeple called *Human One* for \$29 million. In an interview with *Wired*, Winklemann said, "While the piece was sold last night, the piece is not complete... I'm going to continue changing and updating the piece for the rest of my life... You could come downstairs in the morning and the piece looks one way, then you come home from work, and it looks another way"— love it one day, hate it the next (Rose, 2021).

¹⁶ Although NFTs had not yet been conceived, the London-based, self-produced award-winning composer, recording artist, and tech enthusiast Imogen Heap foresaw their possibilities when, during a hackathon weekend, she put together in October 2015 "to explore what could be done with music and blockchains," she released the song "Tiny Human," which sold 222 copies. It became "the first piece of music sold on the Ethereum blockchain using smart contracts to pay the musicians and the mastering engineer directly" (Heap, 2015). She reports that proceeds went to fund what became her organization Mycelia's (http://myceliaformusic.org) Creative Passport (CP) program (https://www.creativepassport.net), a verified digital ID for music makers that lets them access, update, and manage information about themselves and their work and share it with others. CP uses blockchain technology "to hold verified profile information, IDs, acknowledgments, works, business partners, and payment mechanisms, to help get music makers and their works, linked and open (data) for business" (Kastrenakes, 2021) As we move into the metaverse and navigate between platforms and their individual sets of rules, verifiable ID, which is already a problem with streaming audio, will become exponentially more important as we interact with one another as avatars of ourselves.

¹⁸ Internationally, on March 5, 2021, *Kings of Leon* became the first *major band* to release a record as an NFT, generating over \$2 million from *When You See Yourself*, with available NFTs, including not only digitally "collectible" versions of the album, but short music videos and fan experiences like looks backstage and peeks into the artistic process, all of which the buyers can "own," sell, display, revel in the cool factor of, or hold dear as an expression of *Kings of Leon*'s value to them.

The first *gugak* musicians threw their hats into this ring on June 29, 2021, when the "fusion *gugak*," band Leenalchi released an NFT of "A Tiger is Coming." NFTs are meant to generate royalties for the copyright holder as they are traded (the copyright generally does not transfer to the purchaser of an NFT). In the case of the "A Tiger is Coming" NFT, a 3% royalty is provided to the copyright holders whenever the NFT is transferred to a new purchaser. But, as of November 2021, the owner of the token who bought it from its creator for \$10,107.95, had yet to trade it. This is a new concept that Korean artists (and artists around the world) are just beginning to understand. Although Leenalchi is the first to create an NFT in the *gugak* world, they certainly will not be the last. Watch for South Korean government and private marketers to come up with innovative ways to use this technology once it becomes more familiar.

JOSEON POP AND THE RISE OF K-HEUNG

Despite being technically ready for COVID-19, the growing modern *gugak* industry, led by the Ministry of Culture, Sports and Tourism, still has much to think about. Ministers are not artists, and goals and hopes for the future can conflict when one group seeks increased soft power and international recognition for South Korea—repackaging *gugak*'s novel South Korean sonic aesthetics to keep the so-called *Korean Wave* or *hallyu* (韓流), cresting—and the other cares more about *sori*— the retention and transmission of authentic and deeply rooted Korean sounds.

Among the ministers and the old masters, has emerged, a cadre of young, innovative *gugak*-trained (to varying degrees) performers, who have been influenced (in various ways) by K-pop. This generation is native to the smart phone, digital gaming, video on demand, and all that comes with *Instagram, Facebook/Meta, Daum/KakaoStory, TikTok, Naver/BAND, Cyworld*, and so on. With their husky "K-*soriggun*" (K-소리꾼; Jin Hyang-hui, 2021) voices, they are building a new *gugak*-adjacent, marketable K-*sori* (*K*-소리; Ibid) scene. Gugak Broadcasting, which now includes radio, TV, and online streaming, rebranded itself "K-Music" in 2021 (Korean Cultural Center UK, n.d.). Other new words for "fusion" genres include "New *Hallyu*" (신(新)한류), coined in 2020 (Jeon Hyeong, 2020),¹⁹ "K-Rock" (K-樂; Lee Bam-eum, 2020), a named genre adopted by various groups,²⁰ and 2021's most provocative new moniker, "Joseon Pop" (朝鮮팝), which, as it appears, may stick.

These newly designated genres have themselves sprouted several linguistic shoots of various provenance, like the three strung together to publicize the hit television music contest, *Pungryu Captain* (風流大將, *Pungryu Daejang*): "*han, heung,* and hip." *Heung* has long been used opposite the word *han* (恨) to describe the *yin* and *yang* of the emotions found in *gugak* and historically considered so central to its aesthetics.²¹ The idea of *han*, which once helped define what it meant to be part of the South Korean *minjung*, "the people" (and their suffering), is today becoming less and less central to the country's musical identity, arguably owing to the influence of the ubiquitous upbeat aesthetic of K-pop. With its lachrymose *gyemyeon* musical mode (界面調, the *minor* of Korean music), the *sound* of *han* came to embody the South Korean national music aesthetic in the 20th century. Today, it holds as much value to South Korea's Millennials and Gen Zers as it did to the North Korean government in the 1960s, when it banned the mode along with the instrument that might best express it—the bowed "elegant" zither, *ajaeng* (雅筝; Howard, 2011:187).

In contrast, the term *K-heung* denotes the "sparkling" Yoo Changjo, Han Sang-pil, and Kim Sang-Hoon, 2008). Korean aesthetics is currently rising in prominence not only in *Pungryu Captain* promotions but also in commercials and elsewhere in the media. It is sometimes translated as "Korean vibe" (Kim Soyeon, 2021) and "K-excitement" (Seoul National University Center for Arts & Technologies. 2014). With the hyphenated "K" added as a prefix, the once-paired *han* and *heung*

¹⁹ Here is stated: "Unlike the existing Korean Wave's dramas and music represented by idols, the "new Hallyu" will encompass cosmetics, Korean food, modern art, *taekwondo*, traditional culture, and movies."

²⁰ The character for the *ak* in *gugak*, pronounced *rak* (like the English word "rock"), means "fun."

²¹ In other writings, I have translated *han* as "fermented sorrow" and *heung* as "welling joy."

have been lightened to fit Joseon Pop's buoyant "listener-oriented" (Kang Hyun-kyung, 2022) energy. But, with the retention of the old *heung*, artists working in the new genre appear to be consciously signaling their status as traditionally trained performers, singing with aesthetically Korean voices. A few examples follow.

LEENALCHI

Named after the famous 19th century Korean singer Yi Nalchi (a pen name that means "Flying Fish" Lee), one of the "Eight Famous Vocalists" of the late Joseon period (Yoo, 2020), Leenalchi's seven members-four pansori singers (all graduates of Seoul National University), a drummer, and two bassists—initially came together as a one-time (what was then called a) "fusion" project group. Drawing inspiration from the 80s new wave (Leenalchi, n.d.), "their desire for challenging the limits of traditional music and self-expansion of music variety" (Kim Soyeon, 2021) helped them to create a novelty band by drawing on their roots in pansori. Leenalchi's hit song, "A Tiger is Coming Down," first came to widespread attention with its release with the Ambiguous Dance Company (앰비규어스 댄스컴퍼니) on September 19, 2019, through the Onstage 2.0 YouTube Channel. This original video had 16,144,673 views as on February 2, 2022 (Onstage, 2019). But the Leenalchi's rise to fame came when the Korea Tourism Organization (KTO)'s "Feel the Rhythm of KOREA" campaign that was produced to induce people to visit Korea after the pandemic, used the band's music with the Ambiguous Dance Company's moves. Each of the campaign's videos had more than 30 million views on YouTube in March 2021, and closer to 50 million in February 2022 (Kim Soyeon, 2021). Kim Soyeon writes of the band, "it has transformed *pansori* so that it can be enjoyed by all generations by breaking its fixed image of obsoleteness and sorrowfulness." A tiger has indeed come down.

Since gaining fame, Leenalchi has been out in front of what is becoming possible with visuals, not only in their collaboration with the Ambiguous Dance Company, but also what can be done in general with video art and technology. On February 21, 2020, the group released a 3D 360° Official M/V video of "A Tiger is Coming," designed to be viewed in VR goggles. On November 30, 2021, they held their first full XR concert for VR goggles, *Sugungga: Catch the Rabbit*, on the local Korean mobile streaming platform Kakao TV for domestic viewers and on Bandcamp for nonKorean viewers. The 3D concert was designed to be a totally new experience of *Sugungga*, an album that reimagines the traditional *pansori* narrative *Song of the Underwater Palace* (水宮歌). The original full album had been released before the VR concert, on May 30, 2020, with animated videos by Ore-Oh! Studio.

In 2021, Leenalchi won prizes at the Korean Music Awards for Musician of the Year, Best Modern Rock Song, and Best Jazz & Crossover Album. On December 31, 2021, their song "Please Don't Go" was selected as one of "the best 100 songs in 2021" by Apple Music. As on November 2, 2021, Leenalchi had 11,035 monthly listeners on the music streaming platform *Spotify*, which had been blocked in Korea and only officially launched (with premium plans only; no ad-supported free service) in Korea on February 1, 2021, after Korean streaming services like Melon and Genie Music and Flo (together, 80% of the Korean market) were well-established.

GYEONGGI SINAWI ORCHESTRA (GSO)

Although Leenalchi had the hit single of 2020 (Kim Hoo-ran. 2021),²² on the traditionally more conservative side, the Gyeonggi Provincial Traditional Music Orchestra has been generating new interest since Won II took over as its fifth artistic director. Won II had served as the Musical Director of the 2018 Pyeongchang Winter Olympics Opening and Closing Ceremonies—which, along with the children at the end of the story, featured *gugak* post-rock *geomungo*-metal bands like Jambinai, and drone swarm dancing in the sky above the Olympic venue. Won was about to take the Gyeonggi

²² Because there was not a single official video for the song "A Tiger is Coming," it is difficult to quantify the song's "hit" ranking.

Provincial Traditional Music Orchestra, founded in August 1996 with 55 members "to preserve and develop traditional music of Gyeonggi Province and of Korea in general," in new directions. In March 2020, four months after Won II's appointment, the orchestra changed its name to Gyeonggi *Sinawi* Orchestra (GSO) and embarked on a new journey to develop a new style of Korean orchestra in the spirit of *sinawi*. Popularly understood to have been more of an improvisational genre, in this case, *sinawi* would be reimagined to encompass the performances of both the core repertoire of traditional music and newly composed contemporary Korean music, blending traditional and modern music with technology and popular music.

Arriving as director of the GSO just as COVID-19 hit and live performances began to be cancelled, Won II had to come up with a solution quickly. "When on 19 February, 2020, reached its greatest crisis, I invented a new [project]. It started with an idea in the form of a meta performance [—] a work of synthesis of various techniques. It was performed under the title of '[Meta Performance] Future Theater' (메타피포먼스 미래극장) ... [with] a format in which online audiences decided on offline performances such as venue, content, and music through voting... [It was] a performance that had already been experimented [with] and prepared for before [Zuckerberg's 'metaverse' presentation]. It was a performance enjoyed online (offline only 20 people participated), such as playing Korean traditional instruments and AI [generated music] together through deep learning, broadcasting games, (participants' broadcast). There were a whopping 12 performances in 24 hours" (Won II & Clark, 2020-2022).

The 12 back-to-back, around-the-clock performances that took place on November 6 and 7, 2020, attempted to "destroy the concept of time and space, placing the audience in a subjective position" (Jayeon, J, 2020). The "experience" was set up, whereby, online audiences could access the international direct-to-fans chat platform *Twitch*,²³ select a performance method, and instruct offline audience members, who essentially became game characters, to act. Wearing camera devices, five offline performers followed the instructions of online audience members. "Their cameras showed the various performances from a first-person perspective and transcended the limits of 'online' performances that emerged at the time as a unique alternative to the performing arts world in the non-face-to-face era" (Jeong Jayeon, 2020a).

The reporter Jeong Jayeon opened *Twitch* just as one of the performances was reaching its climax. "At dawn, lying in bed and watching a Korean traditional music performance under a blanket was a new world. I felt respected as an audience member just by watching the performance at a time I wanted, outside the implicitly set performance time of 7:30 pm on weekdays and 4:30 pm on weekends." She described how, as she watched, she and the rest of the online audience had to choose between *haegeum* (2-string fiddle) or *ajaeng* (bowed zither) and answer 12 questions to decide on what happened next in the performances. There were 4,096 possible outcomes from combinations of

²³ Twitch and other direct-to-fan/fan-to-fan "decentralized autonomous organizations" (DAOs) are increasingly being used in the K-pop world for fans to catch a glimpse of a different, more personal side of the idol they are following on less direct platforms like Instagram. Gugak's new pop stars, like sEODo BAND, Kim Junsu, and AUX (discussed later in this paper), undoubtably have already figured out many of the possibilities of direct-to-fan platforms like Twitch and Patreon, which allow artists to connect directly with, and monetize their interactions with, their audiences. Coming soon are also tools that drive fan-to-fan interaction, which will not only help artists nurture fan bases, but also take the pressure off the artist to churn out content. As is already happening in K-pop, look for the emergence of DAOs in the so called "Joseon Pop" space. Community-owned and community-governed online organizations that individuals purchase or earn tokens to join, DAOs provide a new way for fans to engage with one another, earn rewards for their fandom, connect in both virtual and "in real life" (IRL) spaces, and vote to influence things like merchandise drops and fan experiences. In the K-pop space, "NCSoft's Universe is used by a wide range of groups managed by companies outside of the Big Four of Korean pop music and includes features like a "private messaging" service, exclusive music, and mildly controversial AI-generated voice calls with idols ...[and] SM's LYSN, which includes the truly innovative Bubble app that has found a way to give K-pop groups all of the benefits of Twitter DMs, without many of the problems." Another example, HYBE's in-house community app, Weverse, for fans of its K-pop roster, has 5.3 million active monthly users and ended 2021 with more than 36 million subscribers. HYBE also backs the app Fave, on which users can join fandoms for artists, including BTS and Taylor Swift, create profiles, post content, and compete for prizes (Cirisano, 2022).

the musical content of Gyeonggi folk songs, sounds of traditional instruments, *sinawi*, works by composers Jiseon Yang and Terry Riley, and an AI sound source reworked by media artist Byeongjun Kwon (Shin Yeseul 2020). "It was a performance that resonated more with the online audience than the on-site audience," she said, having previewed some of the live rehearsals. She was also grateful for the online chat boxes that provided extra explanation of what was going on—something impossible to deliver in person. "If the key is to create a performance that a small number of people participate in but is enjoyed by a large number of online viewers due to COVID-19, the intention is correct … The performance implicitly revealed that AI music, cutting-edge science and technology, and art are inextricably linked in the future, and that artists and the art world must overcome reality" (Jeong Jayeon 2020a).

The music critic Sin Yeseul found the experience almost overwhelming. "Four stages, continuous voting and movement, online and offline, games and performances, musical instruments and body movements, human performances and music playback based on AI sound sources, numerous things collided and intersected. While experiencing many things in a compressed way, contemplative appreciation like before was impossible. I had to take what was useful to me from the flood of information and constantly pick out my preferences. What I experienced in theaters in the past and what I experienced outside the theater today met in one place. When I finally left the theater, I was a little dazed, but I thought that this high speed and overwhelming amount of information could be an important attribute of the theater of the future" (Shin Yeseul, 2020).

During periods in the pandemic when infections decreased for a time, there were short windows in which theaters were allowed to open, although never at full capacity. During one of these, in April 2021, I was able to attend one of Won II's projects with the Gyeonggi *Sinawi* Orchestra. "Sinawi Electronica" (*Sinawi* Electronica. 2021), with its light beams shining out into the audience and its video backdrops, also combined *gugak* with popular and *avant garde* composers/performers/DJ/ lighting and video designers to create a *gugak* spectacle adapted to these times. Won II told me he is considering incorporating VR into future GSO projects (Won II & Clark, 2020-2022).

Won II's former position as director of the Yeowoorak festival (2017-2018) has now been taken over by Park Woo-jae, famous for his experimental bowed *geomungo* work. Park is trying to follow a similar trajectory as Won, asserting "Musicians doing *gugak* and other genres got to gather together and try different things to make *gugak* sound more fun and appealing...We believe it's about time we take it to the next level and showcase more experimental works that *hyper-connect* different genres in the performing arts genre including music, dance and even media art. But in its core, we still focus on presenting *gugak* in a refreshing way" (Yim Seung-hye, 2021).

JOSEON PAN STAR AND PUNGNYU CAPTAIN

In 2021, the "popularity of Leenalchi's sound and the Ambiguous Dance Company's visuals caught the attention of several producers who, impressed by the holographic tiger, began to see new possibilities for *gugak*. The first result was the first 'fusion Korean traditional music audition, featuring an unconventional crossover of various genres and Korean traditional music" (Maekyung platform/MBN. n.d.). "Joseon *Pan* Star" (조선판스타—pansori+star) aired on the cable channel MBN (Maeil Broadcasting Network) 12 times between August 14 and October 30, 2021. The contestants performed before *gugak*-familiar judges, most notably, ShinYoung Hee (b. 1942), Important Intangible Human Cultural Asset for *pansori* (no. 5) for her "Song of Chunhyang." Shin thought hard before accepting the judgeship. "There is a concern that the original meaning of *sori* will be diminished by a focus on fostering stars (스타 양성에 치우쳐 소리 본연의 의미를 퇴색시키진 않을까 하는 염려가 담겼다)," she said. "But I also want to see many stars among our pansori singers (우리 판소리도 스타가 많이 나오길 바라는 마음이다)... I hope that by watching this program our melancholic Korean traditional music industry will regain vitality (이 프로그램을 보며 암울했던 우리 국악계가 활기를 찾길 바란다)" (Lee Hoyeong, 2021). About 1,000 "K-singers" (K- $\Delta \exists \exists$ K-soriggun—in this show, contestants had mixed training from both *gugak* and western musical backgrounds) applied (Jin Hyang-hui, 2021). In the end, *pansori* singer Kim Sang-ok won the top prize (Maekyung platform/MBN. n.d.), worth 100 million *won* (\$89,700) in addition to other benefits (Yoon, 2021). The average rating of a show was 3.2% with a maximum of 4.7% during the third episode. In October, Joseon *Pan* Star's ratings slipped to 2.9%, when a shiny new show with *gugak* content hit the airwaves.

Joongang Tongyang Broadcasting Company's "*gugak* survival" show *Pungnyu* Captain (풍류대장), dubbed "battle of the hip *soriggun*" (*soriggun* 힙한 소리꾼들의 전쟁 indicating a professional singer, especially of *pansori*), debuted on September 29, 2021 and aired every Tuesday at 9:00 p.m. until December 21, 2021. *Pungnyu* Captain, which overlapped with Joseon *Pan* Star for a month and used *gugak*-trained singers exclusively, both complemented JPS and slightly outshone it, becoming perhaps the most significant popularizing stage for *gugak* singers and taking their public exposure to the "next level" by "hyper-connecting different genres" (Ibid.). The goal was to present "strangely familiar but beautifully unfamiliar" music ('희한하게 익숙하지만 아름답게 낯선'음악) to the public... and "imprint the *real* (emphasis added) 'K-*heung*' through the energy of *soriggun* [singers]" (소리꾼들의 에너지를 시청자들에게 그대로 전달하며 진짜 'K-흥'이 무엇인지 각인시킬 것으로 기대된다; Jin Hyang-hui, 2021).

The show popularized the use of the 2020 neologism K-heung (K-興, translated as "K-excitement" in a Seoul National University article on Leenalchi (Seoul National University News Room. n.d.) and as "Korean vibe" (or "K-vibe" elsewhere; Kim Soyeon, 2021). Described as heung, han, and hip (here, perhaps, "exciting, moving, and hip"; Kim Soyeon, 2021)²⁴ the program approached gugak through rhythm and musical accompaniment "strangely" familiar to the larger public—that is, crossovers with popular music instead of traditional music itself (although it was not without its *janggu* drums, haegeum fiddle, daegeum flute, and 25-string gayageum). The singers, however, retained their "husky voices" in the case of pansori singers, or various other "beautifully unfamiliar" traditional qualities in the case of court-style jeongga singers or Gyeonggi minyo folk singers, thus making the general audience feel they were experiencing gugak, with which most Koreans today are unfamiliar, particularly younger viewers. Reporter Jin Hyanghui at Star Today went so far as to headline her piece, "Joseon Pan Star and Pungryu Captain… by now this is gugak" ('조선퐌스타' '풍류대장' …이젠 국악이다; Jin Hyang-hui, 2021).

The judges on *Pungnyu Captain* hailed from the world of popular music, with the exception of Song Gain. Song's mother had been a performer of *Jindo Ssitgimgut* (a shamanic ceremony from Jindo) and Song herself had been a *pansori* singer (Saeji, 2022: 262), but had become a crossover star in the recent Trot revival brought about by televised singing competitions like "Miss Trot" (2019-2021 내일은 미스트롯; average Neilsen rating 32.9%; Hyuk Jo, 2021) and "Mister Trot" (2020 미스티 트롯; both on TV CHOSUN) and "I Like Trot" (2019 트로트가 좋아 KBS; Kim, R., 2020). When Gain fell ill with COVID-19, she was temporarily replaced by Korean-American/American-Korean Kolleen Park, who has a background in *pansori* and *gugak* composition from Seoul National University and has conducted, directed, and performed in musicals and other stage productions. Viewers of *Pungnyu Captain* were able to vote through the *Real Live* (리얼라이브) app (2021) once a day from the end of the third broadcast (October 12, 23:00) to the final round (December 5, 24:00).

The final winner, the six-member group sEODo BAND (서도밴드), received 100 million *won* in prize money (around \$83,850) and, along with other top three winners, the opportunity to tour the country and release an album. sEODo BAND had already won the 2019 KBS New Artist grand prize (2019 년 KBS 국악신예대상 대상) as well as the 2019 grand prize (Minister of Culture, Sports and Tourism Award) at the 11th Korea University Gugak Festival (제 11 회 대한민국 대학국악제대상(문화체육관광부 장관상) and had released an album, *Moon: Disentangle*, on June 21, 2021. Before sEODo BAND ever appeared on *Pungnyu Captain*, the genre descriptor "Joseon Pop" was being used in reference to the

²⁴ *Heung* and *han* are often used to describe Korean traditional music.

music of the group's founder, *pansori* singer Seo Do (Seo Jaehyeon), but the show brought the term into the national consciousness.

The second-place winner was the *pansori* singer Kim Junsu (b. 1991), who holds a PhD in Traditional Arts from Chung-Ang University. Kim had already become popular among young Koreans after appearing in music shows like tvN/Mnet's "I Can See Your Voice" (너의 목소리가 보여), a mystery music game show that aired from February 26, 2015 to April 16, 2021,²⁵ and KBS's "Immortal Songs" (불후의 명곡, June 4, 2011-present). Kim is a member of the National Theatre's National *Changgeuk* Company and became the company's youngest singer to be cast as a protagonist in "an attempt by the theater company to snag younger audiences" when he was cast as Orfeo in the company's 2016 *changgeuk* (唱劇 *pansori* musical theater) production (Yoo, Ju-Hyun & Kim Hyang-Min, 2016).

Third place went to the band AUX (\mathfrak{A}), which had at least six awards under its belt: 2nd Creative Korean Traditional Music Awards Excellence Award (2014), 1st EBS K-Story Pop Contest Gold Prize (2013), Asian Beat Grand Final Runner-up (2011), Asian Beat Korea Finals Winner (2011), Jeonju International Sori Festival Sori Frontier 2nd place (2011), 21C Korea Music Project Grand Prize (2010). All prize winners, and indeed many of the other contestants, were well-known in the *gugak* world.

The first episode of *Pungnyu* Captain scored 3.5% nationwide based on "Nielsen Korea's paid households." Before the airing, the two youngest judges, Wooyoung (2PM member Jang Woo-young (Jang Uyeong) and pop-star/Mamamoo member Solar (Kim Yongsun [Kim Yongseon]), promised that if the average ratings exceeded 5%, they would transform themselves into the style of Gyeongi-style folksinger Lee Hee-moon, known for his unique costumes and experimental performances (Naver TV, 2021). Although the show had a maximum score of 5.3% per minute, the average never exceeded the finale's 4.6%.

Although Lee Hee-moon's popularity peaked before the COVID era, he is still in the game as an early pioneer from way back in 2017. On a January 30, 2022, KBS broadcast of the COVID-era show "Issue Pick with Teacher" (이슈 픽 쌤과 함께), the network introduced Lee with the following splash screens: "Traditional, modern; New Year's traditional music that breaks down boundaries; a singer who performs 'hip' traditional music..." (전통, 현대; 경계를 허무는 신개년 전통 음악; 그리고 '힙'한 전통 음악을 선보이는 소리꾼들...). KBS went on to declare "[t]he reinvention of K-sound..., the era of 'young gugak' has arrived. It's unfamiliar, so it's cool...young geeks flock to Korean traditional music/traditional dance," noting that the proportion of those in their 30s who chose traditional music performances, 12% in 2019, increased to 18% in 2020 (National Gugak Center; K-사은드의 재발경...'젊은 국악"시대 여렸다. "낯설어서 더 멋져" 국악/전통춤에 젊은 광객 몰려. (추 소비충) 전통 음악 공연을 선택하는 30 대 비중 2019 년 12% --> 2020 년 18% 증가 (국립국악원). According to KBS, Joseon Pop is "connecting traditional music and the arts of various genres in collaboration-new words are emerging; change is taking the stage in the wake of a growing public interest in 'hip'—a meaningful transformation for traditional music (조선팝: 전통 음악을 다양한 장르의 예술과 협연 신조어 까지 등장 변화하는 전통 음악 높아지는 대중의 관심 '힙'하게 잇는다 전통 음악의 이유 있는 변신"; KBS. 2022). American colleagues who had never been interested in Korean music were enraptured by Lee Heemoon when he appeared with his group SsingSsing on American National Public Radio's "Tiny Desk Concert" in 2017 (NPR Music, 2017).

Korean colleagues who had never been interested in *gugak* relayed to me that they fell in love with the show *Pungnyu* Captain because it focused on the music and not the judges, who were kind and supportive of contestants—who, in turn, were kind and supportive of each other. There was a humanism to the show that created an atmosphere that people warmed to as they were reintroduced to *gugak*, or introduced for the first time, to K-*gugak* for the 21^{st} century.

²⁵ Kim Junsu appeared in season 3, episode 6.

INTERNATIONAL ONLINE COLLABORATIONS

Next to their domestic appearances, many gugak and gugak "fusion" ensembles and bands are working the international world music performance circuit physically and online. The Korean Arts Management Service (KAMS), under the Ministry of Culture, Sports and Tourism, launched the program "Journey to Korean Music" in 2008, which has played a key role in globalizing Korean traditional music. Over 160 overseas festival directors, musicians, and journalists covering world music have come to Korea year after year to be introduced to Korean music (Kang, Hyun Ji, 2013). The Performing Arts Market in Seoul (PAMS) has served a sister function since 2005. As a result, organizations like American National Public Radio Tiny Desk Concert, which had hosted Ssing Sing in 2017, followed up with the Korean fusion group Ak Dan Gwang Chil (ADG7) in January 2022. Between Ssing Chill and ADG7, the series had featured several other Korean groups, such as BTS, Jambinai, and Coreyah. Worldwide Music Expo (WOMEX), World of Music, Arts and Dance (WOMAD), and Global Fest all have had a constant Korean gugak presence, and London's K-Music Festival has been going strong since it began in 2012. The Association of Performing Arts Professionals (APAP) has also been active in Korea, and Songlines, "the magazine that looks at the world through its music," has featured several Korean groups such as Jambinai, Noreum Machi, and Black String, as well as covering the International Jeonju Sori Festival.

In addition to South Korea's expanding presence on the world music scene, the field of so-called *new music*—new compositions written by composers—is also active innovating with *gugak* musicians and tech. Three recent multilocation projects I was able to attend have been made possible through new low-latency technology.

The first was *daegeum* player Yoo Hong's new music exhibition-concert "Reflection," performed live in a moment of low-infection numbers in April 2021, featuring, the world premiere of a duet, "Vanishing Point Study III-B" by Keiko Harada with Japanese *shamisen* player Honjo Hidejiro via video. Yoo said that, through *daegeum*, he ruminates on sounds from the past to create repercussions for the present and the future. His recitals make up a series for new contemporary music centered on Asian traditional instruments, and this one was planned as an exhibition-concert to expand and communicate artistically in the post-corona era (ART.Map [아트맵], 2021).

Next, I myself played in the American Composers Orchestra (based in New York) and Groupmuse Foundation's *New Canons* concert, which streamed on *YouTube* on October 23, 2021, featuring a new work by Trevor New called "Cohere 1." In the program notes, New described the piece as "written for decentralized simultaneous telematic performance. It features a soloist and orchestra, three quartets in separate locations, each with an audience and six international soloists [including *gayageum*, the only Korean instrument, played by me] from around the world.²⁶ They will be playing together in real time, seeing, listening, and reacting to one another..." The whole *New Canons* concert engaged with the effects of latency (the delay between live sound and transmitted sound), which musicians encounter when playing together online. We usually try to ignore latency in virtual concerts, but, in the pieces in *New Canons*, it was incorporated as an integral part of the compositions.

The third concert, *Electric Gugak*, was presented by La MaMa and CultureHub and livestreamed on November 5, 2021, on the global commons-based peer-produced HowlRound TV network at *howlround.tv*, powered by LiveLab, a browser-based media router for collaborative performances developed by CultureHub. The program notes describe *Electric Gugak* as "a multi-locational live concert which features performances from Seoul, New York City, and Los Angeles, where networked CultureHub studios are located. The performances combine traditional Korean music with new media practices, highlighting new expressions of Korean composition." In the first "piece," electric *komungo* artist Jin Hi KIM created a ritual for COVID-19 live in New York in memory of the 616,000 reported deaths from the pandemic in the U.S. and 4.2 million worldwide (up to that date; as of this

²⁶ Jocelyn Clark, gayageum (Daejeon, S. Korea), Diego Tejedor, violin (Buenos Aires, Argentina), Bernd Keul, bass (in Berlin, Germany), Raymond Seng'enge, kalimba (in Tanzania), Gaurab Chatterjee, hand percussion (in India), Patti Kilroy, violin (in Los Angeles, California), and Trevor New, viola (in New York, New York).

writing, the numbers are approaching one and six million, respectively). Inspired by Korean shamanic *ssitgimgut* ritual, the piece was intended to purify the deceased's spirits. The performance articulated the enormous tragedy, grieving, praying, and, finally, purification as a protest against the anti-Asian bias that has arisen in the pandemic period (in America). A second piece in Seoul by Kim Dae Hong, titled *Paleum* (聖음, 八音), builds on a term used in Korean traditional music context that refers to eight material types or sounds used to make traditional Korean instruments: metal, stone, silk, bamboo, gourd, soil, leather, and wood. The *haegeum*, a traditional Korean instrument, may incorporate all these materials and produces many sounds. This performance intends to show that one can reproduce sounds with modern materials through a newly developed "electronic *haegeum*" along with AI and augmented reality audio–visuals. In the future, these kinds of performances will become more frequent as the technology becomes better, latency decreases, and composers, producers, and performers get comfortable with online collaborations and find new ways to incorporate them into their work.

NEW TECH: NEW ISSUES

As is true for even the most basic inventions, new technologies are designed by people for purposes that serve very specific interests—to make money, acquire fame, or simply to overcome obstacles. It is beyond the scope of this paper to discuss the history of digitization in South Korea as well as all the potential issues associated with the coming era of the metaverse/web 3.0.²⁷ We are only starting to understand what web 2.0 social media has wrought worldwide in the last decade and a half—psychologically, physically, socially, legally, and environmentally... that is to say, existentially. We have barely begun to consider the debates and theories of mid-20th century thinkers like Asimov, Turing, and Nozick, or Neal Stephenson, who coined the term *metaverse* in his 1992 science fiction novel *Snow Crash*, or Ernest Cline, who wrote *Ready Player One* in 2011, as their perspectives relate to spaces like social media in today's exponentially expanding metaverse, much less address important concerns related to the one little patch of pixelated ground in that metaverse on which *gugak* sits.

Writing as a performer who, under the social distancing requirements of the past two years of COVID-19, has studied, collaborated, and, in general, stayed plugged in using many of the tools, sites, apps, and approaches surveyed in this article, I can say with confidence that the new technologies have a long way to go to get the bugs worked out. As exciting as it was to play gayageum in pieces by Pauline Oliveros and Trevor New in the American Composer's Orchestra online concert in October 2021, even moving the sound channel out of Zoom to a multichanneled Cleanfeed could not solve time zone problems (the concert ran from 3:00 a.m. to 5:00 a.m. Korea time, like many an international Zoom conference). Moreover, we were at the mercy of the beginnings of a DDoS (Distributed Denial of Services)²⁸ attack on the Korean Internet that shut it down completely later in the morning. I lost Internet connection during the concert three times. Even in the rehearsals, when there was no digital-connection problem, sitting alone in my cold room, listening through earbuds and watching through my iPhone at 2:00 a.m., worried I was keeping the neighbors awake, my ability to be fully present in the moment was impeded. VR goggles might have been able to solve my problem but not in their current design. The issues we face in what are still largely experimental technological endeavors, whether those issues be technical, philosophical, or psychological, are as confounding as they are numerous. And yet one can still imagine what it was *supposed* to be like, or how it could eventually be—as we continue to deploy new tech tools to "make money, acquire fame, and overcome obstacles."

²⁷ Seoul National University recently received part of a US\$50m investment program from Meta (Facebook) to ensure the concept of mandatory distances between virtual reality avatars meets regulatory and legal requirements. (Milmo, 2022). Meta to bring in mandatory distances between virtual reality avatars (*The Guardian*. Feb. 4.)

²⁸ Distributed Denial of Services attacks seek to disable a service by barraging it with data.

IMPLICATIONS FOR GUGAK

DISTRACTED LEARNERS

Most of us in South Korean traditional *gugak* are not techies—not even the digital natives, who know what they know and not more. With notable exceptions, we are still using silk strings instead of metal or even gut.²⁹ Yayoi Kusama's analog metaverse, *Infinity Mirror*, is enough visual excitement for most players I know. We are interested in sound and otherwise spend our time on the minutia of vibrato according to mode, and the flow of *sanjo*. One of the paramount concerns of anyone engaged in *gugak* today—the quest not for K-*sori* but for $ko[\pm]$ -*sori*—old *sori* (*true* and rooted sound)—is to continue receiving the teachings of the masters before they die—our teachers, the last generation of artists who were trained by former masters before the distractions of the Internet and smartphones. This is the well from which we must drink even as we create new music in new ways. As we have learned during this pandemic, learning, playing, and performing virtually cannot begin to compare to learning, playing, and performing in person.

STUDENTS OF "PROFESSOR MACHINE"

Even before COVID-19 and the emergence of new hi-tech learning methods, some very good players, for reasons of cost and convenience, and in many cases, because their own teachers are no longer among the living, were learning from recordings and no longer studying with a living teacher from whom they could receive feedback. They suffer from what my teacher, Ji Seongja (b. 1945), calls "Gi Seonsaeng" (기[개]선생님) syndrome— "studying with Professor Machine" —an updated version, if you will, of what they called sanjin [寫眞] sori in the early 20th century, meaning someone who copied their teacher "like a photograph." My teacher blames this, in part, to the lack of time available to teach and receive improvisation methods in the late 20th century. The metaverse threatens to make this worse if what we really want to pass on includes living traditions like sanjo. Mistakes and distortions have a way of getting baked into recordings-Master Ji always hears them immediately in a performance of someone who has studied with a "Professor Machine." She has a term for musicians, like many in today's fusion groups, who draw from the well of tradition but are unable to retain it for long before its essence disintegrates: "paper cups." They constantly need to go back to the well with a new cup, she says, and too often do not. I confess I worry that the day is soon coming that the metaverse will have grown so vast that even those of us who have spent much of our lives hauling the nuances of tradition into our rooms in big metal buckets will be unable to find our way back to the well.

FROM GUGAK TO K-MUSIC TO K-ROCK

In early November 2021, the *gugak* radio station changed its English name from *Gugak* Broadcasting (국악방송) to K-Music. The new brand had already taken hold in a concert I did for the STB channel on November 6, 2021. The *gugak* brand in English had only been established in 2011 for the 60th anniversary of the National Gugak Center (formerly, the National Center for Korean Traditional Performing Arts and, before that, the National Classical Music Centre). "K-Music," which was coined by the K-Music Festival in London for the Olympics there in 2012, hitched *gugak* to the Korean Wave K-brand train and K-Music is now one of the brands that, along with Joseon Pop, and K-Rock, will transport us into the metaverse to perform for an audience that grew up playing MMOGs (massively multiplayer online games).

²⁹ East Asia has often traditionally used strings made of silk rather than gut as in some places of the West.

CONCLUSION

The Ministry of Culture, Sports and Tourism has been trying to develop strategies for Korea's global integration since at least the first decade of this century—now the metaverse will supply the venue (Al Farouqi, 2021). Ten years ago, Hilary Finchum-Sung noted, with foresight, "The building of a national image has taken the forefront of the commodification of traditional music, and, as a result, theatrical effects, popular trends, and audience expectations play active roles in the cultural production of traditional music on the global stage." According to Hackforth-Jones & Roberts (2005), these keep, "[r]edefining 'traditional" and showcasing performing arts that are "transmuted, refashioned, or invented to serve present cultural and political agendas" (Hackforth-Jones & Roberts, 2005:5).

The Ministry's policies flow through the National Gugak Center and its K-Music FM and TV stations, which have long recognized that, given its disappearing listener base, traditional *gugak* is not the best use of airtime. With its small audience, particularly among the young, *gugak* is not heard on the radio much these days, and that, in turn, feeds its obscurity. As the saying goes, "you cannot fall in love with something you cannot find." Having moved online during the COVID era, and encountered *gugak* via the new TV shows, now more people *can* find *gugak* but often in a westernized rhythm signature in passing tourism ads, smartphone promotions, and snack food commercials, where its glittering mood is used to spark K-*heung* in potential consumers.

As K-pop bands dominate the global music scene, incorporating "conspicuous iconography, shooting locations, and aural elements that explicitly *represent* Korea" (Saeji, 2022: 250), the Ministry of Culture, Sports, and Tourism's longstanding effort to "industrialize and globalize" Korean culture is finally gaining lift-off, helped by the hypermodern Korea brands beneath its wings. In 2012, Finchum-Sung wrote that, between 2009 and 2010, almost five million dollars were set aside to support the industrialization and globalization of traditional arts content; more than three hundred thousand of that, she writes, was to be used to support the "development of traditional arts digital contents" including through the following stated strategy: "Uncover a global artist who will appeal to popular sensibilities domestically and globally and develop global digital contents appropriate to the new generation…" (Finchum-Sung, 2012; 134).

Finchum-Sung observed, "Due to the continued specialization of *gugak* education and subsequent estrangement from the daily sonic experiences of many South Koreans, to a great majority of the consuming public any type of music remotely connected to *gugak* aesthetics or materials is *gugak*" (Ibid.: 138). What was true then is true many times over now: "Once disparate forms of new traditional music and conservative genres are sharing a space in the youth-driven market... the aim of the performance shifts to highlighting the physical and emotional manifestations of Korean identity that have proven to be popular and appealing across cultural borders for both domestic and international audiences" (Finchum-Sung, 2009: 53). The result of the Ministry's policy is to redefine *gugak* in the public's mind as something "based on *gugak*"—those half-learned traditions my teacher describes as having been taken from the well in a paper cup.

In a recent interview with sEODo BAND, the group's lead singer Seo Jaehyeon admitted feeling embarrassed about winning the 2019 KBS New Artist grand prize. "The other contestants at the awards had traditional instruments and could express *gugak* elements in a more professional way," he said. "We had guitar, percussion, bass guitar, and keyboard, plus singing that 'resembled' traditional *pansori* in a way" (The Korea Herald [코리아헤럴드], 2021). Joseon Pop bands know what they are doing is not really traditional and, although full of respect for the old masters, are rightfully unapologetic. When asked how they define *gugak* today, one of the band members replied, without hesitation, "The next hot keyword." They laughed and then remarked that even the fact that they can talk about it means that the public *now knows what gugak is* (even if the public thinks that it began with the sEODo BAND). The group's percussionist Park Jin-byeong went on to say that he thinks "a large part of how our team could have come this far was because of the keywords 'K-music,' '*gugak*,' 'Joseon Pop'—and that the public showed interest in them." *Gugak* was once "hard" and "boring," he said, suggesting we should "laud" this age in which "*gugak* is blooming." Kim Seong-hyun, the keyboardist, agreed: "It's time to move away from a specific framework and express *gugak* music freely" (Sonamu Music, 2020). It's hard to argue otherwise. Since the tiger cannot be stopped from coming down, perhaps the best strategy is *détente*.

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