Orchestra in Digital Transformation:
Expanding Perceptual Possibilities of Classical Music with a Hybrid Performance Format

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Introduction

"We take our 'spatial' experience of music as a psychological fact that is illustrated not only by our musical notation but by a great number of musical terms, such as *high*, *low*, *ascending*, *descending*, *horizontal*, *vertical*, *parallel movement*, *opposite movement*, *pitch*, *scale*, *interval* […] etc." (Lowinsky 1941, 57.) Yet the spatial arrangement of musicians in relation to each other as well as to the audience has been rather static and one-sided, meaning that audience members are mostly (often sedentary) frontal listeners and never active participants.

A contemporary performance practice aims to break with this paradigm using digital media. Michalis Nicolaides, a video artist, and Frederike Möller, a pianist, came up with the idea of a hybrid performance format called *Raumkonzert,* literally translated as "spatial concert" or "expanded concert." The German artist duo encourages the musicians to play in separate areas, thus inviting the audience to embark on their own journey through the architectural and musical space. Originally conceived in 2019, the latest such performance took place at the Witten/Herdecke University, Germany, in 2022, where the concept was adjusted to fit the campus setting in close collaboration with the conductor of the university orchestra.

This article aims to describe and evaluate the transformative as well as esthetic potential of the hybrid analogue-digital approach and retrace the origins of its participatory impetus in the intermedia art scene of the 1960s. Because the authors acted as curators for the university concert, our article will provide more than a formal analysis of the performance practice and will also elaborate on the collaborative and interdisciplinary process of its site-specific execution. This experience also afforded us the unique opportunity to conduct a comprehensive survey of musicians and visitors immediately after the concert, the results of which are also included in this article.

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The Concept of Raumkonzert *and Its Performance at Witten/Herdecke*

Despite the self-evident fact that the orchestra is a sonic organism and therefore belongs together or in one room, the concept of the *Raumkonzert* spread the musicians across the university building. Ten different instruments — violins, viola, violoncello, contrabass, flute, oboes, bassoons, bugle, timpani, and piano — were played synchronously and as one at eleven different locations, with only the pianist and the conductor sharing the same space. To play together while apart, the musicians were connected to each other and to the conductor via digital audio and video equipment. The conductor had to lead the musicians via a Zoom-like projection, which became a de facto centerpiece of the concert. (WittenLab 2023.)

Thus, the concert presented the audience with both a live and a digital orchestra, which could be seen as a walk-in sound-and-space installation. "Walk-in" is a key word here: The format challenged the typical static arrangement and the fixed position of the audience members, who were invited to move freely throughout the concert space. They could choose among the aforementioned main view of the conductor or the individual live-voices of the musicians staged in different locations.

One can be forgiven for thinking that Nicolaides and Möller developed the concept as a response to the global COVID pandemic, as suggested by the Zoom-like interface that we have grown very familiar with. However, the artistic duo implemented the concept of spatial concert for the first time before COVID, namely, in 2019, when Clara Schumann's music was played at the Heinrich Heine Institute in Düsseldorf in honor of the bicentennial anniversary of the composer's birth. The second performance did indeed take place during the pandemic in the summer of 2021, when it took over the storefronts at the subway station that had been left unoccupied as a result of the lockdowns. There, ten musicians played Erik Satie's *Musique d'ameublement* and the *Gymnopedie* No. 3, as well as excerpts from Handel's *Water Music*.

In fact, in 2022, Nicolaides and Möller would address the specific consequences of the pandemic in an artists' statement. They compared the social distancing that was the explicit goal during much of the pandemic with the societal distancing we may experience today. In their own words,

> Even before 2020, we perceived a division in society. Instead of coming together, we are moving away from each other. With music, we are therefore looking for ways to bridge the resulting distance to each other. With this format, we want to demonstrate that despite distance – at least for a short time – joint action

> between all participants is possible. (Nicolaides and Möller 2022, in conversation with the authors.)

The following concert at the Witten/Herdecke University took place in November 2022. Two very different pieces of music were chosen for this two-act performance. First, the university orchestra performed the piece *The Unanswered Question* by Charles E. Ives in an analogue prologue to the digital performance in which the orchestra played Mozart's *Concerto for Piano and Orchestra in C Major.* Crucially, Ives's *The Unanswered Question* is one of the first compositions in which musicians were instructed to play in separate locations. The composer began working on it at the beginning of the twentieth century and reworked it in the 1930s. The piece, which matches the experimental format acoustically in its dissonant avant-gardism, was written for three groups of instruments, which would perform in different tempos and would be placed separately – the strings being offstage. Although it is an important precursor, it is not a direct inspiration for this new spatial concert.

The novel aspect of the 2022 concert – the initial conceptual separation of the musicians for the work by Ives and their subsequent digitally mediated "reunion" in the Mozart part – underlines the aspects that make *Raumkonzert* a flagship format, because it not only shows that site-specific art projects can be carried out in pandemic conditions in a health-compliant manner but also showcases the modalities and creative potential of digitalization. The familiar musical concert format is mediated using digital audio and video to enable a novel and dynamic art experience. Thus, the main reason for the project's hybrid structure is to provide a perceptual shift, and the hope is that the combination of the classical and the contemporary elements will encourage engagement with digital media and take away some of the caution with regard to innovative digital formats, as well as offer new insight into performance of classical music.

Historical References and Aesthetic Analysis

The English translation of the German term *Raumkonzert* that we have chosen is "expanded concert," which is an explicit reference to "expanded cinema," an experimental approach to filmmaking that was particularly prominent in the 1960s and 1970s and that seeks to challenge the typical cinema-going practice and the strict frontal film-exhibition setup. Expanded cinema prefers to leave the comfort of the cinema space and invade gallery or "off" spaces, where it can stretch its legs between multiple screens or their replacements, such as gallery walls or columns or even fog.

Expanded cinema resembles and predates what we today term *installation art*. Its goal, not unlike that of Nicolaides and Möller, is an active, participating spectator who is now free to choose her position in relation to the projection or projections. Interestingly, the expanded descriptor refers both to the spatial expansion but also to an expanded consciousness:

> When we say expanded cinema we actually mean expanded consciousness. […] Expanded cinema isn't a movie at all: like life's a process of becoming, man's ongoing historical drive to manifest his consciousness outside of his mind, in front of his eyes. (Youngblood 2020, 41.)

These remarks can also, in our view, be applied to the *Raumkonzert*. The typical act of listening to a symphonic orchestra is a solitary and potentially meditative experience, one that is directed inwards. The audience members can close their eyes and have the music be the only thing they are perceiving, letting themselves be "consumed" by it. Yet the spatial concert directs one's attention outward in more ways than one, making audience members engage with the surroundings and analyze the way they are perceived. As we moved through the space during past expanded concert performances, we found ourselves not only listening to the musicians but also actively identifying the instruments we wanted to listen to more. We have found ourselves paying attention to the other attendees and observing their behavior. In short, we found ourselves trying to "optimize" our concert experience based on a series of spontaneous but considered esthetic judgments.

Besides the similarities between expanded cinema and the expanded concert format, what is notable is that although expanded cinema is now a well-established concept, expanded orchestra is not. It is our opinion that this is due to the technological demands placed on such an event involving orchestra. The avant-garde spirit of the 1960s experimental filmmakers allowed them not only to tolerate but even to celebrate the small imperfections and the minimal desynchronization of the expanded cinema, both of which are to be expected when multiple analogue projectors are employed at the same time. The noise produced when the projector is placed in the same space as the viewer as opposed to the projectionist's booth, the film flicker, all foreground the apparatus and make each showing unique. In fact, the flicker cinema movement would later celebrate these exact things.

Classical music, on the other hand, would not tolerate such things as even slight desynchronization or noise pollution, a point we will address below.

In the same decade as the expanded cinema was born, the pioneering video artist Nam June Paik also pursued the idea of integrating musical performances into spatial events. His multilayered interests in composition and visual art, as well as his encounters with artists of the Fluxus and New Music movements, led him to experiment with unusual instruments for making music and site-specific atmospheres for listening. Sound was defined as art, but more importantly in our context, Paik decided to expose (!) music rather than perform it. In 1961, he designed the score for the *Symphony for 20 Rooms,* which asked the audience to move through a series of sound spaces.

During his lifetime, the score remained purely theoretical and was never presented to the public, most likely because Paik's idea of what music meant to him differed too much from the institutional thinking of those years. Thus, the score (republished in Frieling 2023, 124-25) reveals many details of how Paik once envisioned the production of noise, sound, and music media, embedded in a do-it-yourself and discover-it-yourself atmosphere for the audience. The artist's notes state that visitors on the tour should follow a fusion of different sources of recorded music such as well-known classical music and national anthems, as well as recorded sounds from TV news, radio advertisements, and nature, along with live music and interactive areas for self-made sensory experiences. These are just a few instructions from Paik's extensive and global repertoire of themes for his *Sinfonie for 20 Rooms*.

The artist's critical and radical attitude toward music theory and his early contribution to sound art are obvious, but what is most striking for the subject of this article is the crucial role of walking in forming auditory awareness. As Paik wrote in his explanation of the "New Ontology of Music" two years later: "In the normal concert, the sounds move, the audience sit down. In my sosaid action music, the sounds, etc., move, the audience is attacked by me. In the 'Sinfonie for 20 Rooms,' the sounds etc., move, the audience moves also." (Paik 1963.)

Paik himself admitted that the composers Karl-Heinz Stockhausen and, particularly, John Cage's *Music Walk* (1958) inspired him to work on performance practice that gives the audience the freedom to move in and between several concert spaces (Paik 2023, 124-25). The genre term, *symphony* (in German, *sinfonie),* that Paik used in spite of his distance from classical music forms, emphasizes his intention not to design a parcours of free-standing spaces but rather to connect the rooms through the flowing and multilayered perception of the concertgoers so as to form an overall appearance (a concert, as it were).

Looking back to the 1960s, the two examples, both the expanded cinema approach and Paik's early installation art, call for the audience's physical participation to dissolve the boundaries between high art, real life, and do-it-yourself culture. By moving through the cinematographic or rather musical resonance space, the visitors use their own bodies to establish an individual relationship with the moving images, music, and their own minds. Both examples show technology-based, but nevertheless analogue precursors of a continuing artistic experiment of transforming reception of an artwork into a participatory act by the audience. Ever since then, emerging communication technologies, such as the internet, Web 2.0, and augmented and virtual reality have been influencing artistic work and have been used to strengthen collaborative elements in public reception. Today, against the backdrop of an everyday world permeated by digital technologies, these previously formulated ideas can be realized better than ever with the support of digital media.

The process of digitalization, therefore, affects both artistic production and cultural communication, as the music performance format *Raumkonzert* shows. Allowing concertgoers to wander through a spatial installation at their own pace, much like the figure of the flâneur, and giving them the liberty to encounter individually each orchestra musician within the framework of a classical music concert could only be accomplished thanks to the recent advances in digital-media technology that allow synchronous transmission of both image and sound.

Curatorial Considerations

Indeed, the artistic potential of the format can only be matched by the difficulty of its technical execution (not to mention the additional strain placed on the musicians who suddenly find themselves playing under radically different conditions and in relative isolation). Simultaneous digital audio-visual transmission without delay is absolutely necessary for this concept, because it aspires to incorporate both current technology and a changing format of classical music performance, which is both expensive and difficult to implement. In fact, even our plans have developed over time, shrinking considerably from the overly ambitious original proposal aimed at involving the entire campus. The idea was to have the music be the unifying force that connects all these separate buildings, thus having the music "represent" the university. However, that would have been even more costly and complicated. Instead, we opted to have the concert serve as an artistic inauguration of a newly constructed campus building.

Here, we must highlight the format's adaptability to the surrounding architecture and the extent to which the walking parcour offered to the audience can change the way music is perceived. Each new incarnation of the concert requires a different musical choice as well as a complete new orchestral arrangement and precise staging of the musicians within the environment.

Because having musicians play in this manner is highly unusual and potentially disorienting, we thought for a long time about whether we should lead the audience through a certain route. In the end, we did not provide any guidelines to give audience members the greatest freedom of movement. Because the concert encourages navigating surroundings in a manner that does not resemble everyday movement, it is an occasion to explore and reexperience a familiar environment, a way to highlight its architectural specificity.

Although concert halls, art institutions, or museums may appear more likely to be invested in such an experimental project, universities should find engagement with the format just as beneficial, and the Witten/Herdecke University proved to be a perfect stage for the expanded concert. Our reasons to produce it there were twofold: On the one hand, we, as scholars, saw the opportunity to undertake this experiment and evaluate its transformative potential. On the other hand, as educators, we saw it as a good fit for our university's liberal-arts program, which has been compulsory for students of all faculties since the institution's founding in 1983. Both the interdisciplinary approach required to execute the project and the opportunity it offered the students to engage with visual and performing artists as well as musical practice and digital art theory made it worthwhile.

Visitor Feedback

To compare whether the artistic and curatorial aspirations associated with the project matched the experiences of the concert audience, we compiled an anonymous visitor survey to be filled out voluntarily by every attendee. The audience was a mix of university students as well as more mature concertgoers.

Almost half of the concert guests chose to fill out a survey. They did so even though no additional incentives, such as the chance to enter a prize drawing for filling out a survey, were offered. We take this to signify that most guests had a strong reaction to the experience, creating a desire to share their feedback. Further, some of the musicians who participated in the concert also chose to take part in the survey and share their perspectives.

To ensure the survey results were accurate and truthful, all the questions were framed in a neutral way: There were no leading questions, and the multiple-choice answers always ranged from positive to negative, with both extremes sounding equally plausible. One could also always choose to answer "other" or "don't know," so that respondents did not feel forced to give answers that would not reflect their experiences.

The first question asked the audience how they found the concert format, giving the suggestions: exciting, unnecessary, complex, overly technological, visionary, didactic, artistic, creative, nonsustainable, or modern. Respondents could select more than one option, and 60 percent of those who filled out the survey described the format as *creative*, 50 percent as *exciting*, and 33 percent as *artistic*. Other options were less popular, with *topical* being the fourth most popular answer with 25% of the vote.

Contrasting the format itself with the concert experience, the visitors were also asked if they have found the evening to be any of the following: moving, exciting, disappointing, logical, digital, innovative, tiring, intuitive, inspiring, or confusing. Here, too, one was able to give multiple answers. The descriptors *innovative, inspiring, moving,* and *exciting* were the clear winners, with 40 percent to 50 percent of the respondents choosing one or more of these options.

The survey also told us that most visitors did not prefer a single specific mode of concert viewing. They chose to combine walking around with the sedentary listening experience for the main view. In general, the concertgoers liked having "the freedom of movement and being able to listen to the instruments of [their] choice." Even those who preferred the main view replied that they "liked having a choice." Overall, not a single person reported feeling they "had to walk around for an optimal concert experience" or "did not like having a choice and would have wished for more detailed instructions." Yet some of those who chose to stay in the main hall and listen to the main view elaborated that they did so because they "found the [overall] experience to be overwhelming / confusing" or "prefer the classical concert format."

Finally, most respondents have noted that the format had an educational effect because it enabled them to "hear the individual instruments more clearly" and helped them "appreciate the individual skills of the musicians" as well as "gain a new outlook in regard to orchestral and classical music."

Notably, they gave these responses even though very few of the respondents perceived the format as didactic, per the first question.

Finally, the visitors were given the space to leave a comment. Here, next to extremely positive exclamations and compliments, we were also offered a range of thoughtful feedback regarding the social nature of orchestral music, comments regarding the topicality of the format, and more lengthy descriptions of personal experiences. Some skepticism was undeniably present, with some audience members finding this way of experiencing music too distracting, strenuous, or even contradictory to the way classical music should be played. In particular, one commenter wrote, “An existential characteristic of classical music [is] that it vibrates together and makes the room resonate. This is not made possible by today’s concept.” Yet an absolute majority of comments were highly commendatory, and many voiced a wish for future events of this nature.

Interestingly, while the spatial aspects of the format were addressed very often, no comments focused on the audiovisual technology and whether it played a role in the musical experience. Similarly, the fact that the main view presents the audience with a digitally mediated sound was not remarked upon. This leads us to presume a certain openness in the audience’s attitude toward technology as well as a very high degree of accustomedness to digital media. It also shows that although the format is extremely reliant on technology, it does not dominate the concert aesthetics, simply allowing a social and music-oriented concert experience.

Conclusion

In recent years, many cultural institutions have begun to rethink methods of cultural communication and educational practice befitting a digital society, which seeks interactivity and participation as desired modes of engagement with culture. The pervasive effects of digitalization on individual and social life leave cultural institutions no option but to develop increasingly digital approaches to presentation and mediation of cultural heritage. *Raumkonzert* shows that analogue and digital spaces are not an either/or but can be constructively combined. As the survey results show, the alternation between analogue and digital presentation and their mutual proliferation can contribute to a novel and exciting multiperspective experience.

Although *Raumkonzert* transcends the limits of a conventional concert experience by expanding it with digital media and a site-specific dimension, its most significant achievement is creating a new kind of relationship between the musicians and concertgoers. After all, the format’s hybridity lies not only in its combination of digital technology and analogue play but also in the contrast between the two modes of communication it creates: On one hand, there is the liveliness of the analogue encounters between musicians and visitors and the physicality of the act of walking, and on the other, there is the digital synergy between the musicians and the conductor. The format provides the concertgoers with the opportunity to experience orchestral music in close-up, as it were, and it also encourages them to switch to a wider overview, and back, meaning that a "complete" concert experience can only be achieved by alternating between analogue and digital presentation.

With their performance concept, Nicolaides and Möller want to counter the phenomenon of increasing individualization, which they noticed even before the Covid pandemic, and to answer the question: "How do we play separately and yet together?" *Raumkonzert* is not a self-contained work but rather a template for contemporary performance practice that is tailored to the requirements of the occasion and the architecture, an evolved successor of concepts developed but not realized in the past.

At the same time, engagement with the past or historical works can require more care than an artistic project can provide. As the survey results also demonstrate, we have to examine if, despite all the obvious advantages, the extent to which the appropriation of newer digital technologies for the staging of historical content can be justified in terms of the loss of authenticity or if a contemporary interpretation has the freedom to experiment. The study of the *Raumkonzert* and the report on its realization at the University of Witten/Herdecke are intended to promote the current discussion on possible fields of application of digital media in educational practice.

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