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Virtual Spaces of Music and Dance.

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Virtual Spaces of Music and Dance. The TRaMIR Project on Intangible Heritage

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Abstract

Since 2021, I have served as the scientific coordinator of the TraMIR (traditional music instruments room) project which aims to create a music room for discovering, learning and interacting with traditional Greek music instruments and dances. The project involves the development of a portable room equipped with a platform where visitors can experience the traditional Greek musical instruments through VR glasses, engage with interactive content to acquire knowledge, and even try their hand at dancing traditional Greek dances using a machine learning system. The Music Room offers visitors a live, dynamic and evolving experience of traditional Greek music and dances departing from static and outdated methods. It serves as a powerful tool for blending culture, education, heritage and tourism. In this paper, I will describe where the Music Room stands as a project on humanities and technology. Furthermore, I will delve into the methodological choices made during the project's proposal phase, particularly focusing on how I aimed to represent different geographical areas and digitally blend them with current performance practices and spaces. This discussion will shed light on how the digital space of the project has been transformed into a virtual museum of performing arts. Finally, I will add some critical reflections on the incorporation of 3D technology and artificial intelligence in traditional music and dances within this project -a rarity in Greek culture and traditional performing arts. Additionally, I will explore how an anthropological approach has contributed to overcoming social science deficits encountered through the project's development.

Keywords: Space, digital culture, AI, music, dance, geography.

A Note on Geographies of Music and Space

For what is geography, if it is not the drawing and interpretation of lines? The only quality that makes my geography unusual is that it does not limit itself to the study of visible things. Instead, it tries to foreshadow a cartography of thought. To practice this art, however, is incredibly difficult, for any attempt must face the challenge of being abstract enough (Olssen, 1991, p. 181).

Gunnar Olssen posed this rhetorical question, as he concluded his book *Lines of Power*. His radical ideas and approach on geography served as inspiration for me when introducing new theories and concept in my music geography class.¹ In the anthropology of music, terms like borders and lines have not been widely embraced. Instead, we are keenly interested in fluidity and plasticity aiming to dismantle the barriers between music, dance and everyday life and to highlight multiple music and dance identities. This interest is largely due to our recognition of the fact we inhabit a digital world where the boundaries between “here” and “there are constantly blurred. In this unique process of blending, space emerges as a protagonist, continuously produced and reproduced culturally. It transcends traditional boundaries embodying memories and emotions, and operating within broader cultural contexts.

Music, by its very nature, serves as a “spatial enabler”, granting individuals the power and the capacity to construct, shape and transform space through experiential means, tapping into the intricate network of their emotions and memories. The manner in which transcends natural geographic boundaries and imbues both open landscapes and built environments with significance through human experiences, introduces us to a nuanced understanding of human geography within ethnomusicology. Specifically, I refer to a mechanism intricately intertwined with the continuum of traditional music and dance forms and their contemporary expressions across diverse cultural performances. Deconstructing this mechanism through classical and multisited ethnography has provided me with deeper insights into how space continuously oscillates between its myriad manifestations and identities -from the tangible, pragmatic and perceptual to the abstract, intangible and idealized. These identities, though not mutually exclusive, are encountered in varying intensities through the medium of music and dance.

¹At Spring Semester of 2018, I taught a course entitled *Music maps and networks* at the Department of Music Studies, National and Kapodistrian University of Greece. As a part of the teaching requirements, I submitted a proposal outlining new theories and methodologies for the field of music geography. The framework proposed was subsequently integrated into the official curriculum of the course. [(https://en.music.uoa.gr/undergraduate_studies/)]. Please note that the provided translation contains errors, including the misspelling of Gunnar Olsson’s surname and the absence of an exact excerpt from his book.

Understanding this inherent heterogeneity of space through performing arts is essential for navigating the diverse lived dimensions of space and seamlessly transitioning between different spatial modes.

Why Tramir? A Flashback

Greece boasts a diverse array of musical traditions that have originated and evolved over different periods, in various geographical regions, and with within distinct cultural contexts. These Greek musical traditions continue to be performed, revived and transformed within contemporary society. In the 1990s, a groundbreaking interdisciplinary project focusing on traditional Greek music and dances emerged known as the “Thrace” project.² Prior to this initiative, recordings of Greek traditional music were relatively scarce. Traditional music was not perceived or studied as performance art -as something dynamic and evolving. Instead, research and publications were primarily focused on linguistic aspects such as song lyrics, often neglecting instrumental music and failing to recognize music, singing, and dance as performing arts in their own right, beyond mere literary expressions.

Another significant gap in research was the lack of systematic recording of dances using contemporary notation methods. Additionally, there had been no previous attempts in Greece to undertake a comprehensive study that integrates text, music and movement within a historical and cultural context. This research need was addressed by the scientific team of the program, imbuing the study with a comparative and interdisciplinary approach. Recognizing the interpretive specificity of all elements within musical culture, the group sought to emphasize the two fundamental dimensions of interpreting and performing musical practices: place and time as both perception and expression (Droulia and Liavas, 1999). This shift from a mono-dimensional to a multi-dimensional view of performing arts was innovative, marking the first instance in Greece of an ethnographic and cross disciplinary approach to the performing arts, breaking away from an established tradition of narrow research focus. Recordings were concluded during fieldwork, and for the first time, ethnographic data underwent digital transformation, a cutting-edge development within the Greek research context. This innovation led to fieldwork and its representation in a database. The innovation led to extensive discussions, collaborations, and disagreements, as it represented the initial attempt to bridge the humanities with technology. Countless hours were spent in meetings and discussions, aiming to integrate and transform the performance spaces into structured databases.

² The research program of the “Friends of Music Society” funded by Stavros Niarchos Foundation <http://epth.sfm.gr/Default.aspx>

This exploration of space, place, geography, digitization, and performing arts led me to conduct ethnographic research on spatial dynamics, alongside the development of an educational project focused on performing arts and technology as part of my doctoral dissertation. To introduce children to the diverse music traditions of Greece, I collaborated with the Dance Workshop of Filoproodos Enosi Xanthis (FEX, Progressive Union of Xanthi³), located in the city of Xanthi in Northeastern Greece.⁴ During my study of the Workshop's performances, rehearsals, materials gathered from the teachers' fieldwork, public presentations, festivals, and everyday lives of workshop's members, I worked on integrating and utilizing lived experiences and spaces with digital tools for educational purposes. In the years 2005-2007, using a smart board, such as the Sony one I employed, was considered innovative, and touch boards and pads were still uncommon. By combining digital fieldwork materials with a touch board, the 'ethnomusicology at schools' project became the first ethnomusicological program for schools in Greece, bringing fieldwork directly into the classroom. The initiative incorporated digitized materials of traditional music and dance, reimagining the classroom as a new fieldwork setting.

The experience, experimentation, and innovation gained from the afore mentioned projects, culminated in the preparation, submission, and ultimate acceptance of the TraMIR project proposal for funding.⁵ As the scientific coordinator of the project, I presented TraMIR at the Xanthi's Folklore Museum, describing it as a Music Room designed for the exploration, learning, and interaction with Greek traditional musical instruments and dances. TraMIR is envisioned as a portable room where visitors engage with traditional instruments using VR glasses, access interactive content for knowledge acquisition, and attempt to learn Greek traditional dances through a machine learning-based system. This innovative concept immerses visitors in post-space combining sound, imagery, music, and dance to showcase both material and immaterial cultural heritage, alongside digital transformation, artificial intelligence, and performance. It represents a hybrid post-world with anthropos -human presence- as its core across all dimensions. The room features instruments taught, crafted, and played by musicians in contemporary concerts, festivals, and celebrations. These musicians shared melodies and rhythms through their instrument performances, transforming the materiality of the instruments

³ The research and educational project described as "carnival as a living element of our cultural heritage". (Sirakouli V. (2009)., Carnival as a living element of our cultural heritage. In Browne & Kreiser (eds) Popular culture values and the arts: Essays on elitism versus democratization. (pp.60-69) McFarland Publisher and V.Sirakouli (2006) "Η εθνομουσικολογία στη σχολική τάξη: Η δημιουργία και εφαρμογή ενός σχολικού εθνομουσικολογικού προγράμματος" (Ethnomusicology at school: Creating and applying and ethnomusicological project at school). Πρακτικά Συνεδρίου «Λαϊκός πολιτισμός και εκπαίδευση».

⁴ FEX Organization retrieved from <https://fex.org.gr>

⁵ TraMIR project retrieved from <https://tramir.bookscanner.gr/>

into immaterial cultural expressions, and subsequently digitizing them. As a result, TraMIR offers a unique opportunity for visitors to engage with the worlds and stories of contemporary traditional music and dance communities. In this way, TraMIR stands as a pioneering project, seamlessly combining 3D technology, artificial intelligence, music, dance, and applied public anthropology.

Reality of Virtuality?

Space has always played a central role in ethnomusicology. As researchers, we engage in 'fieldwork', shaping and framing our field as we move through villages, cities, countries or even continents to conduct ethnographic studies. Despite our constant navigation of different spaces and places, the concept of space was largely avoided until the early 2010s due to its complexity in capturing personal and shared experiences and memories. Traditional interpretations often depicted space as the location where specific sounds are heard. However, more progressive perspectives have emerged, deconstructing space based on how individuals experience music within it. This latter viewpoint offers insight into the interplay between music and physical geography transforming our understanding of space from a mere backdrop to a dynamic component of human geography.

The second perspective served as an inspiration for the TraMIR project, where physical geography served as not just the starting point, but also the motivation and methodological approach to creating a platform where musical instruments and dances intersect with Greece's physical landscape, revealing deeper dimensions of humanistic experience and geography. The musical instruments selected for TraMIR are not only integral to, but also informative representations of, various aspects of the system of classification established by Erich Moritz von Hornbostel and Curt Sachs.⁶ However, any system reliant on the categorization of instruments is inherently complex. Within the Hornbostel-Sachs system, instruments are often presented in a manner that reveals little beyond their basic structure as sound-producing tools or cultural artifacts, abstracted from the broader and more intricate contexts in which they exist. TraMIR avoids the limitation of musical instruments to merely indexical functions, static museum presentations, or simplistic optical representations divorced from their cultural significance. Instead, it emphasizes the everyday life of the instrument and their dynamic interrelations between the instrument, performance, and music.

The subsequent digitization of Greek traditional music instruments in 3D form marked the first time such instruments had been rendered digitally, resulting in a multi-faceted digital identity

⁶ Hornbostel E. M. and C. Sachs. (1914) *Systematik der Musikinstrumente Ein versuch*. In *Zeitschrift für Ethnologie*. 46(4-5), 553-590.

that reflects the diverse characteristics. Initially, the instruments are presented as objects, focusing on their form and attributes. This includes providing descriptions of their shape, function, and significance to make them accessible to users who may be unfamiliar with the everyday cultures from which they originate. The collection features instruments that bear visible signs of use, acknowledging their 'life' in the hands of contemporary musicians' during practices and performances. These instruments showcase the relationship between the performer and the object, highlighting the tangible connection the instrument and the intangible realm of performing arts. This methodological choice is crucial in a connection between the physical instrument, and the artistic expression it facilitates.

The sound operates on two levels corresponding to the shape and form of the instruments. Firstly, it consists of a collection of audio files featuring the sound of the selected instruments played by the musicians, the majority of whom contributed their instruments for photography and digitization. Secondly, the sound archives are supplemented with a selection of audio and audiovisual performance files from the project's collaborating entity, the Folklore Museum of Xanthi. While articulating the performance environment – encompassing sound, image, and text –, the emphasis is not solely on the technologically three-dimensional representation of instruments, but also on the multidimensional nature of the musical space. This encompasses physical space, time, and the dynamics of music and dance performance, such as occurring during public events like festivals and celebrations. Public performances serve as indicators of change in the realm of traditional music, as they transition from everyday contexts to the stage. The project's flexibility extends beyond the selection of geographical areas within Greece represented by musical instruments; it also lies in the approach taken, enabling connections between a broader range of music genres, instruments and dances that have been digitized. This opens up possibilities for incorporating music and dances from other regions of the country in the future.

The videos of the performances from the dance workshop of the Folklore Museum serve to portray it as a living organism, where traditional music is not just a relic of the past but a vibrant part of present-day experience. The accompanying information texts are focused on emphasizing this relationship, a connection further underscored by interactive features such as quizzes offered on the platform. For instance, these quizzes may include brief narratives about the life histories of musicians. By recognizing the form of the material object and the context in which it is situated, the function of each instrument in specific situations becomes apparent, shedding light on how it is perceived and utilized. Through the stories shared by musicians, a deeper understanding of the interconnectedness between the instrument, the performer, and the

object is established. As the memories, perceptions, and understanding converge, the realms of space and music align. This alignment fosters deeper levels of spatial comprehension and musical appreciation.

In the realm of digitization and digital humanities, numerous questions arise regarding the constitution of reality. Anthropologists considering everything as data, are challenging the notion of culture being virtualized. To truly comprehend the diversity of existing lifeworlds on their own terms, the persistent idea of digital cultural formations being somehow less authentic than other cultural forms must be reevaluated (Boelstorff, 2016). TraMIR contributes to this notion by asserting that digital culture is not merely a quantifiable and mappable collection of objects and practices, but rather a complex blend of the real and the virtual. Ultimately, it breaks down the traditional separation between qualitative and quantitative knowledge.

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