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Is The New Media Art Capable to Shape the Instrumentalist's Role? – From Interpreter to (Co)Creator

10.34623/6nk2-1v87

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Abstract

This article states the influence of New Media Arts on the instrumentalist's role. By instrumentalist the article refers to those who interpret written music from the Western music tradition, which has the artistic activity grounded on interpreting a musical score by recreating sonically compositions in concerts. This discussion pretends to argue that the musician develops different roles when digital means are involved. For this purpose, the instrumentalist activity as an artist and the new media arts creator's profile will be defined. Therefore, it will be possible to analyse how the new media usage and concepts could impact the artistic life of an instrumentalist. The idea of creator and/or recreator will be discussed regarding the instrumentalist's role, and it will be observed if this role changes under the new media arts mediation. To achieve the article's conclusions, it will use the author's experience as a clarinettist and New Media Arts artist and various conceptions and definitions concerning instrumental written music from the Western tradition and New Media Arts.

Keywords

Creator • Interpretation • Instrumentalist • Music • New Media Arts • Score

Received 2024-01-27
Accepted 2025-01-14
Published 2025-02-27

Travasso, R. (2025). Is The New Media Art Capable to Shape the Instrumentalist's Role? – From Interpreter to (Co)Creator. *Rotura – Revista de Comunicação, Cultura e Artes*, *5*(1), 153-159. https://publicacoes.ciac.pt/index.php/rotura/article/view/337

1. Introduction

The instrumentalist of written music from Western tradition – classical music – is someone who works on mastering the instrument under rigid methodologies and learning works from the great composers in an education system that has been focused on creating soloists for decades (Caicedo, 2020). Also, the relationship between instrumentalists and composers, mediated by the score, evolved until a high complexity level. This evolution began with the musical notation created by Guido d'Arezzo (Travasso & Gomes, 2021) in the Middle Ages. At that time, and during the Renaissance, the instrumentalists were free to improvise, having only a conduction line as a music score. In the Baroque Era, composers started using specific instructions concerning pitch, rhythm, and articulation; in the Classical Period, dynamics and accentuations were added. However, it was with Beethoven that a new conception of the composer arose. From that point, composers began to aim their work to achieve masterworks, which made the scores more specific, complex, and rigid (Pace, 2009). This evolution made the instrumentalists need expertise covering aspects such as articulation, dynamics, intonation, pitch, tempo, timbre, historical contexts, scenic instructions, physical movements, musical intentions, and others (Laukka, 2004; Travasso *et al.*, 2022b). So, the specialisation of the instrumentalists naturally became almost exclusively focused on instrumental interpretation through a score, lacking a curriculum that gives them habits of interdisciplinary work with other areas not within music, critical-creative thinking, and technological skills, narrowing their learning interests exclusively on mastering the instrument (Cook, 2014; López-Íñiguez & Burnard, 2021). According to Cook (Cook, 2014), a performance of written music – classical music – reflects the choices made by the performers through their creativity dimension and knowledge regarding musical culture. In this way, the instrumentalist performance has two dimensions: (1) acquiring instrumental skills that allow the music interpretation and (2) using its musical culture knowledge to build the structure and the paths of the performance; both, combined, give rise to the score interpretation. As a matter of fact, music performance is a very complex activity (Nijs *et al.*, 2013), and that is a reason enough for the instrumentalists to focus on their instrumental and interpretation skills.

Concerning New Media Art, specifically the media, we live in a convergence culture where all media are connected, offering the most accessible access to information on the civilisation's history (Jenkins, 2016). All the evolution led us to the Internet of Things, transforming an ordinary device/object into something capable of being used in network (Greengard, 2015). In this way, the convergence took a broader shape capable of embracing almost everything, especially if we considered concepts such as the Tangible Acoustic Interface (Crevoisier & Polotti, 2005) or models of Human-Computer Interaction and Human-Computer Interface, which uses different objects to offer interaction. New Media Arts are evolving under these concepts and technologies, in which imagination is the only limit for creativity, making traditional art schools obsolete. In New Media Art, the idea of a pupil learning from the master for years until they achieve the expertise level doesn't apply. There is no time for it because the technological evolution doesn't stop. In contrast, the classical musician is still working on mastering the instrument under a rigid methodology and learning works from the great composers in a traditional education system (Caicedo, 2020).

Finally, this paper aims to discuss how the influence of New Media Art on instrumentalists can be transformative, leading them to change and assume a role as creators. With this in mind, this paper will have the following structure: different roles – to define the three possible roles for instrumentalists; new media arts in instrumental music – analysing examples of a disciplinary cross between those two areas; Impact – to understand the impact of the new media art on instrumentalists; conclusion. For this matter and to get data, the proceedings of conferences such as NIME, xCoAx, and other publications will be analysed.

2. Different Roles

Instrumentalists are artistic professions developed over centuries, and the instrument itself is a technological device developed by instrumentalists who participate in its evolution, working alone or with luthiers (Gati, 2015; Magnusson, 2019). An instrumentalist could act under three roles: interpreter, co-creator, and creator. The primary role is to be an interpreter, constructing their interpretation through scores grounded on knowledge and its social environment. Besides the instrumental skills inherent to each instrument, the interpretation is related to expressivity. This word can have two connotations: (1) expression concerning acoustic variables – tempo, dynamics, articulation, sound duration, timbre, others –, (2) the expressivity concerning the emotion felt by the public; the instrumentalist works both expressivity domains in is practice (Lindström *et al.*, 2003). To De Poli (De Poli, 2004), expressiveness content in music has three different levels: (1) the composer's message, (2) the performer's musical intentions, and (3) the listener's perceptual experience. Thus, music interpretation is to give a sonic shape to a score using an instrument in order to offer a musical experience to someone. Therefore, as shown in Figure

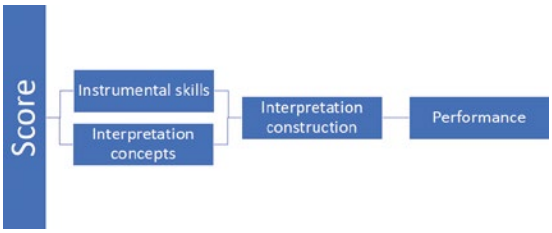

Figure 1. Interpretation. Source: Author

1, the score has a central role in this definition because it is a detailed guide for the instrumentalist to build its interpretation, both musical instructions and social and historical information – a score from the Baroque period will give a different input than a contemporary's.

At this point, discussing the difference between interpretation and creation is essential. Interpretation from a score could be considered a creation because someone is creating a new way to perform it. However, besides its use as a guide for performance, this score makes boundaries for the instrumentalist, who has to be creative enough to create fresh, new, and perfect interpretations/readings capable of impressing an audience, in many cases, familiar with the music. Thus, when this paper approaches the concept of creator, it approaches something new beyond interpretation; in other words, interpreting something is to transmit someone's thoughts correctly, and creation brings something new to life (Dreyfus, 2007). An example given by Deyfus is that a composer playing their own music would never look to the performance as an interpretation. Also, the concept of interpretation means that there are rules and/or some authority that instrumentalists should respect.

Concerning the co-creation role, the most straightforward example is to state a close cooperation between instrumentalist and composer, for instance, Anton Stadler with W. A. Mozart (Hoeprich, 2008). However, the collaboration at the time was more related to instrumental exploration and did not regard the instrumentalist taking options in the compositional process. During the twentieth century, a concept of open work appeared (Magnusson, 2019), in which the instrumentalist becomes responsible for creative judgment and the piece's development. This role means that an instrumentalist and composer work together to develop a new musical piece – previously or in performance – and if the composer was the dominant figure in the relationship for centuries, this paradigm changed in the last decades to a more balanced one (Budai, 2014). It is relevant to state that this partnership has moments in which instrumentalists are not interpreting but helping to create something, such as a score. This means, in those cases, instrumentalists were working in interdisciplinarity, exploring different skills from interpreting.

Finally, the instrumentalist can take the creation's role in various manners. The more obvious is to compose or improvise(Dreyfus, 2007) their own music, which was standard practice for centuries until it reached a high level of complexity in both roles, composer and instrumentalist (Magnusson, 2019). However, both fields' broader exploration and complexity demanded higher specialisation and dedication, which resulted in separated tasks – generally. Beethoven had an essential role in this matter because he was one of the first composers to become an independent artist (Pace, 2009). During the twentieth century, empowered by technology, particularly with the capacity to record and reproduce, composers became performers more efficiently rather than writing a score to be interpreted by another instrumentalist (Gati, 2015). In the same way, instrumentalists also started using technology to augment their instruments and concretise their creative ideas by themselves without the mediation of a composer. In conclusion, technology triggered instrumentalists to reach the role of creator across different fields.

3. New Media Art in Instrumental Music

New Media Art is every art that couldn't be idealised and/or materialised and/or exhibited without digital technologies and whose contents, aesthetic fruition, and cognitive changes due the time (Alves da Veiga, 2021b) – in other words, art concepts disseminated through digital means need time for appreciation – and which uses at least one of the following characteristics: interactivity, randomness, and virtuality (Marcos *et al.*, 2009). For Manovich (2001), the New Media has to have five characteristics: numerical representation – described mathematically and subject to algorithmic manipulation; modularity – composed by independent layers; automation – only possible through numerical representation and modularity, the human is not used at least in one creative process; variability – only possible through the first two characteristics which makes possible different versions or using; transcodification – transforming the other four attributes in a format or a cultural object. Therefore, New Media Art must include a media component with these features. In this way, when New Media Art is mentioned in this article, it refers to art that uses new media devices – as defined by Manovich – as digital means at least in one stage of its construction or dissemination, needs time to be appreciated, and uses one or more of the following features: interactivity, randomness, and virtuality.

There is one significant aspect of New Media Art in a performative context: in general, the artist, besides

the performative interpretation, is also the creator. To create, the artist uses all the knowledge/skills/social experience acquired during their life. For example, if someone has carpentry skills, this skill is useless for an instrumentalist performance. In contrast, for a New Media Art artist, it could be an asset, for example, to design the exhibition space to create some furniture for a specific device, among other utilities. In this way, anything could be utilised for creative purposes in New Media Art, which doesn't apply to several art fields.

There is an idea that the internet, and its technological evolution, is a local for free access to resources where people share their research, stimulating Collective Intelligence. The concept of Collective Intelligence (Castells, 2001; Leimeister, 2010; Salminen, 2012) is not new and means that there is a collective – a group of people with or not different points of view – combining their intelligence – which, according to Wechsler (Leimeister, 2010), is the ability to act purposeful, to think reasonably, and to act effectively – to create knowledge. Also, New Media Art has this sharing concept, allowing creators to observe others' works to get inspiration or starting points for their works. Collective Intelligence and technology allowed people to become artists without frequent art schools, opposing a paradigm rooted in the Western cultural civilisation through musical conservatoires – using the music example. Also, this sharing concept encourages artists to dress up as scientists and programmers, giving shape to their creative ideas.

Concerning the art's final product and applying it to music, New Media Art could be used with two purposes: (1) amplifying the music somehow but keeping it as the unique section of the artefact/work; (2) using music as one layer from various and being one part from a whole (Travasso *et al.*, 2022a). However, there are several ways to use the digital in instrumental music: actuating/augmenting the instrument, digitally complementing the sonic performance, using the instrument as a Tangible Acoustic Interface, and using the digital component as a performative partner, among others.

4. Impact

Several examples of specific cases will be given to analyse New Media Art's impact on instrumentalists. For this purpose, the proceedings from NIME – The International Conference on New Interfaces for Musical Expression –the proceedings from xCoAx – Conference on Computation, Communication, Aesthetics & X – and other publications were analysed.

The first example is the project Feedback Cello (Eldridge & Kiefer, 2019), in which the cello, although being played traditionally, is augmented with additional controls; it

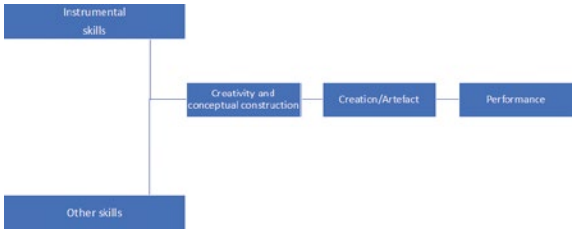

Figure 2. New workflow. Source: Author

can be manipulated by external live-coded digital signal processing and can play autonomously. MAD Clarinet 2.1. (Travasso, 2022), a project from the author, is also a performative system where the instrumentalist, through sensors, enables the instrument to be used as a generator of visual generative art, with the author taking charge of all the construction and performative processes. Strings P (Bisig *et al.*, 2021) – an extension of the Strings – is a generative project that uses a violinist and his instrument to interact with different media through improvisation. Using Max/MSP software, Augmented Drums: Digital Enhancement of Rhythmic Improvisation (Amadio & Novello, 2000) allows the percussionist to dialogue with a computational component and to add several effects to his instrument, creating an interactive electroacoustic improvisation system. The last example, also an exploration from the author, is about using a clarinet as a tangible acoustic interface through sensors of solid vibrations, enabling it to process the clarinet sound and to use it to communicate with the computer (Travasso, 2023, 2024).

Several other examples could be addressed. However, it is already possible to conclude from those projects mentioned that instrumentalists worked in areas outside the interpretation, at least in one part of their projects. It is possible to observe a pattern: the use of technology, the instrumentalist's creation role, and the involvement in areas outside performance – for example, using technology to augment their instruments.

Another aspect derived from the concept of New Media Art is that the artist's background is the starting point for a project. While the instrumentalist starts from a score, working within boundaries between musical knowledge and skills, when mediated by New Media Art, the instrumentalist is encouraged to use anything they want for creation and performative matters. Therefore, the creator's background influences the creative process – as shown in Figure 2 – and this does not invalidate methodologies applied to New Media Arts, such as A/r/cography (Alves da Veiga, 2021a), A/r/tography (Springgay *et al.*, 2005), or others.

Lastly, another characteristic of New Media Art comes from the internet concepts related to Convergence Culture and Collective Intelligence (Jenkins, 2016). It leads

the artists to be involved in technological evolution and share their findings. This artistic concept of sharing brings instrumentalists a new culture. In sum, New Media Arts is an opportunity for instrumentalists to be more involved in multidisciplinary and interdisciplinary work with other artists from other areas or non-artists, collaborating in one or more stages of the creative and performative process.

5. Conclusion

The instrumentalist is linked to an interpretative role. Nevertheless, during history, some paths were made in which other roles were assumed, such as co-creator and creator. This paper doesn't claim that New Media Arts is the first or the only path for those roles; it does claim that this junction can transform and broaden the horizons of possibilities for instrumentalists. It also states that this artistic relationship fosters the instrument's exploration in new domains. However, according to the examples in this article and the author's experience, New Media Art changed his artistic behaviour as an instrumentalist. An instrumentalist who spends several hours a day practising the interpretation of a score seems to have the creator's role blocked in their mind because they are focused on the perfection of the interpretation. The author's involvement with New Media Art gave him a different perspective regarding his role as an artist, unlocking the creator inside and allowing him to explore his instrument under technology's influence, augmented it, and create performative systems for his performances with his music. Concluding, the common point of all the examples given in this article is that the instrumentalist extrapolated the interpreter role to (co) creator through the creation of performative systems, exploring the augmentation of their instruments, creating their performances, exploring valences outside the musical field, and cooperating interdisciplinary with different areas.

References

[1] Alves da Veiga, P. (2021a). Método e registo: uma proposta de utilização da a/r/cografia e dos diários digitais de bordo para a investigação centrada em criação e prática artística em média-arte digital. *Rotura – Revista de Comunicação, Cultura e Artes*, (2), 16-24. https://doi.org//10.34623/y2yd-0x57

[2] Alves da Veiga, P. (2021b). *O Museu de Tudo em Qualquer Parte, Arte e Cultura Digital: inter-ferir e curar*. Grácio Editor, CIAC.

[3] Amadio, M., & Novello, A. (2000). Augmented Drums: Digital Enhancement of Rhythmic Improvisation. *xCoAx 2020 Computation, Communication, Aesthetics & X Proceedings*, 315-321.

[4] Bisig, D., Wegner, E., & Kimmig, H. (2021). Strings P. *xCoAx 2021 Computation, Communication, Aesthetics & X Proceedings*, 546-553.

[5] Budai, I. B. (2014). The Flutist as Co-creator: Composer-Performer Collaboration in the Flute Music of Hungary. *School of Graduate Studies – Theses*, 281. https://utoronto.scholaris.ca/items/d526c95b-d0ee-4280-beb7-035fc4b357be

[6] Caicedo, P. (2020). New Ways of Making Music and Being a Musician in the Digital Era. Diagon. *An Ibero-American Music Review*, 5(2), 66-77. https://doi.org/10.5070/d85247762

[7] Castells, M. (2001). *A Galáxia da Internet: Reflexões sobre a internet, os negócios e a sociedade* (M. L. Borges (trans.)). ZAHAR.

[8] Cook, N. (2014). Between art and science: Music as performance. *Journal of the British Academy*, *2*(March), 1-25. https://doi.org/10.5871/jba/002.001

[9] Crevoisier, A., & Polotti, P. (2005). Tangible acoustic interfaces and their applications for the design of new musical instruments. *Proceedings of the 2005 International Conference on New Interfaces for Musical Expression (NIME05), June*, 97-100. http://www.nime.org/proceedings/2005/nime2005_097.pdf

[10] De Poli, G. (2004). Methodologies for Expressiveness Modelling of and for Music Performance. *Journal of New Music Research*, *33*(3), 189-202. https://doi.org/10.1080/0929821042000317796

[11] Dreyfus, L. (2007). Beyond the Interpretation of Music. *Dutch Journal of Musicological Research*, *12*(3), 253-273. https://doi.org/10.1080/01411896.2020.1775087

[12] Eldridge, A., & Kiefer, C. (2019). The Self-resonating Feedback Cello: Interfacing gestural and generative processes in improvised performance. *Proceedings of the International Conference on New Interfaces for Musical Expression*, 25-29.

[13] Gati, T. (2015). Anamorfoses na música eletroacústica mista. In *Anamorfoses na música eletroacústica mista*. Cultura Acadêmica Editora. https://doi.org/10.7476/9788579837074

[14] Greengard, S. (2015). The Internet of Things. In *NBER Working Papers*. The MIT Press. http://www.nber.org/papers/w16019

[15] Hoeprich, E. (2008). *The Yale Musical Instruments Series: The Clarinet*. Yale University Press.

[16] Jenkins, H. (2016). *Cultura da Convergência* (S. Alexandria (trans.)). ALEPH.

[17] Laukka, P. (2004). Instrumental music teachers' views on expressivity: a report from music conservatoires. Music Education Research, *6*(1), 45-56. https://doi.org/10.1080/1461380032000182821

[18] Leimeister, J. M. (2010). Collective Intelligence. *Business & Information Systems Engineering*, *2*(4), 245-248. https://doi.org/10.1007/s12599-010-0114-8

[19] Lindström, E., Juslin, P. N., Bresin, R., & Williamon, A. (2003). "Expressivity comes from within your soul": A questionnaire study of music students' perspectives on expressivity. *Research Studies in Music Education*, *20*, 23-47. https://doi.org/10.1177/1321103X030200010201

[20] López-Íñiguez, G., & Burnard, P. (2021). Toward a nuanced understanding of musicians' professional learning pathways: What does critical reflection contribute? *Research Studies in Music Education*. https://doi.org/10.1177/1321103X211025850

[21] Magnusson, T. (2019). Sonic Writing, technologies of material, symbolic & signal inscriptions. In *Bloomsbury Collections*. https://www.doi.org/10.5040/9781501313899

[22] Manovich, L. (2001). *The Language of the New Media*. The MIT Press.

[23] Marcos, A. F., Branco, P. S., & Zagalo, N. T. (2009). The Creation Process in Digital Art. In B. Furht (Ed.), *Handbook of Multimedia for Digital Entertainment and Arts* (pp. 601-615). Springer. https://doi.org/10.1007/978-0-387-89024-1_27

[24] Nijs, L., Lesaffre, M., & Leman, M. (2013). The musical instrument as a natural extension of the musician. In M. Castellengo, H. Genevois, & J.-M. Bardez (Eds.), *Music and its instrument*s (pp. 467-484). Editions Delatour France.

[25] Pace, I. (2009). Notation, Time and the Performer's Relationship to the Score in Contemporary Music. In D. Crispin (Ed.), *Unfolding Time* (pp. 151-192). Leuven University Press.

[26] Salminen, J. (2012). *Collective Intelligence in Humans: A Literature Review*. https://arxiv.org/abs/1204.3401

[27] Springgay, S., Irwin, R. L., & Kind, S. W. (2005). A/r/tography as living inquiry through art and text. *Qualitative Inquiry*, *11*(6), 897-912. https://doi.org/10.1177/1077800405280696

[28] Travasso, R. (2022). MAD Clarinet 2.1.: Sound Travels. *Proceedings – 3rd International Conference on Digital Creation in Arts, Media and Technology: Emerging Extended Realities, ARTeFACTo 2022*, 1-4. https://doi.org/10.1109/ARTeFACTo57448.2022.10061246

[29] Travasso, R. (2023). The Clarinet as a Tangible Acoustic Interface: New Features. *The Barcelona Conference on Arts, Media & Culture 2023: Official Conference Proceedings*, 67-78. https://doi.org/10.22492/issn.2435-9475.2023.6

[30] Travasso, R. (2024). The Clarinet as a Tangible Acoustic Interface. *International Journal of Social Science and Humanity*, *14*(1), 5-9. https://doi.org/10.18178/ijssh.2024.14.1.1185

[31] Travasso, R., & Gomes, J. A. (2021). Evolving Instrumentalist – a continuous trajectory. In I. Guerrero & D. Galindo (Eds.), *I Congreso Internacional "Intersección: arte, sociedad y tecnología en la innovación musical"* (pp. 186-191). Procompal Publicaciones.

[32] Travasso, R., Veiga, P. A. D. A. D., & Gomes, J. A. A. (2022a). The Influence of New Media Art on the Instrumentalist and on his Performance: New Performative Paths. *Proceedings – 3rd International Conference on Digital Creation in Arts, Media and Technology: Emerging Extended Realities, ARTeFACTo 2022*, 1-9. https://doi.org/10.1109/ARTeFACTo57448.2022.10061257

[33] Travasso, R., Veiga, P. A., & Gomes, J. A. (2022b). Major Events that Changed the Instrumentalists ' Performance. *International Journal of Music Science, Technology and Art*, *4*(1), 50-62. https://doi.org/10.48293/IJMSTA-86

Bio

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