

**UNDERSTANDING THE IMPACT OF DIGITAL TECHNOLOGY ON PERFORMING ARTS:  
A COMPARATIVE ANALYSIS OF SCIENTIFIC AND PROFESSIONAL ISSUES**

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#### **ABSTRACT**

In the performing arts sector, the changes brought about by increasing financial constraints and ever-changing audiences are of many kinds. An important lever developed in response to these upheavals is the use of technological and digital innovations. The aim of this research is to take stock of the issues identified by academic researchers on the one hand, and by industry professionals and stakeholders on the other hand, in order to draw a precise map of the challenges and their implications. To this end, a systematic literature review will be carried out on two bodies of literature: articles published in scientific journals and articles published in professional journals (mainstream media or specialized media in culture and performing arts). This first step will allow us to compare the points of convergence and divergence of these corpuses and to identify the main research avenues to be exploited in this fertile field of investigation.

**Keywords:** digitalization, cultural and creative industries, digital transformation, performing arts, systematic literature review

# UNDERSTANDING THE IMPACT OF DIGITAL TECHNOLOGY ON PERFORMING ARTS: A COMPARATIVE ANALYSIS OF SCIENTIFIC AND PROFESSIONAL ISSUES

## INTRODUCTION

A large number of cultural structures have begun to reflect deeply on the actions they need to develop in order to maintain a high profile in an increasingly competitive environment and to maintain and strengthen their relationship with their audience(s). These changes, brought about by growing financial constraints but also by the ever-changing nature of audiences, are of various kinds. One of the main levers developed to respond to these upheavals concerns the use of technological and digital innovations, which today occupy a growing place in all management issues of cultural and creative industries (Waldfoegel, 2017), whether they concern their strategy (Tobelem, 2017), their management control (Amans, Mazars and Villesèque, 2020) or their marketing policy (Colbert, Rich, Brunet et al., 2014).

An examination of recent practices in the live performance sector shows that these technological transformations are well and truly at work: While some initiatives are aimed at increasing sales (via dematerialized ticketing) or engaging a community as stakeholders in an institution (for example, by redefining two-way communication on social networks), others are undergoing a more profound transformation, using NICTs as a true lever for creation (for example, by integrating virtual reality during performances) or distribution (through the use of recording, livestreaming, or streaming in general). It's a fact that the performing arts industry is using these new technologies in a variety of ways. However, a review of the scientific literature shows that this sector is less mature than others in this area of technological innovation. Research dedicated to digital transformations is less developed here (Peukert, 2019; Paris and Massé, 2021) than in the museum or music sectors (Chen, Liu and Chiu, 2017; Jarrier and Bourgeon-Renault, 2020). Characterized by "the physical encounter between performers, an audience and an artistic work" (Robin, 1992), the transposition of the characteristics of live performance into a virtual/digital world (which in particular opposes the qualification of "live" to that of "recorded") necessarily raises questions for scholars... but also for practitioners, some of whom are still hesitant about the interest in developing certain digital actions and how to do so.

The aim of this research is therefore to take stock of the scientific work carried out on this front of the digital transformation of the performing arts and to compare it with the issues highlighted by professionals in the press. To this end, a systematic literature review (Purchase and Volery, 2020; Xiao and Watson, 2019) will be developed on two corpuses: on the one hand, articles published in scientific journals, and, on the other hand, those published in generalist or specialized media consulted by professionals in the performing arts. Once this inventory has been made, the next step will be to compare the points of convergence and divergence between these corpuses, in order to highlight the main research avenues to be exploited in this extremely rich field of investigation.

## METHODOLOGY

To carry out the systematic literature review of the corpus of scientific journals, we first identified the terms used to identify the articles concerned. We determined 27 generic keywords related to the performing arts and 12 related to digital transformation (through an initial exploratory reading of these topics and comparison with some previously established lists). We then searched the *Web of Science*, *Scopus* and *Ebsco* databases for academic articles published in English or French whose title, abstract or keywords contained at least one of the keywords relating to digital transformation and at least one corresponding to performing arts. After several stages of purification of the results, we obtained a list of 192 publications actually corresponding to our research topic. These publications were then classified and analyzed based on the abstracts and keywords provided by the authors.

With regard to the literature review on "professional" media, the lack of a database led us to adapt the methodology. In order to select the media in which to search for articles on our topic, we asked professionals in the cultural sector which media they consulted in the course of their professional activity. We received responses from 26 practitioners of various ages, genders, professions, and geographical areas, allowing us to identify 77 different sources of information. Of the 15 most cited sources, in this first exploratory phase, we chose to work with 4 sources (mentioned 20 times by our sample) with internal search engines to facilitate the collection of articles: 2 specialized "culture" sources (*Newstank Culture* and *Nectart*) and 2 generalist press media (*Libération* and *Télérama*). Within each

medium, we searched (via their internal search engines) for articles and content published between January 2019 and December 2023 (a 5-year period covering the pre-Covid, Covid, and post-Covid periods), using the keyword "spectacle" (performing arts) combined with "technologie" (technology) and/or "numérique" (digital) and/or "digital" (also used in French). All articles were collected in a common database, resulting in a total of 337 articles (Box 1). A manual thematic analysis was then carried out on the basis of abstracts and keywords in order to "synthesize" each content.

#### **Box 1 - number of articles retained by "professional" information medium**

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| Newstank Culture: 890 results obtained to date; 94 retained after sorting on subject relevance and eliminating duplicates.<br>Nectart: 66 articles obtained; 27 retained<br>Libération: 624 results were obtained; 109 were retained.<br>Télérama: 1083 results were obtained; 107 articles were retained. |
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These two databases were subjected to a thematic analysis, which identified the main issues analyzed. We then plan to use a text processing program (*Iramuteq*) to carry out a statistical analysis using factorial correspondence analysis, and to compare the similarities and differences between the results of the two corpuses.

### **THEMATIC ANALYSIS OF ACADEMIC LITERATURE**

The articles were published in 98 different scientific journals (15 of which accounted for 50% of the research identified), 80% of which were published after 2012 and 54% after 2017. Despite the very wide range of disciplines involved in performing arts, 77% of the articles listed relate to three arts in particular: theatre (50% of articles), dance (19%) and opera (8%). Five main issues relating to the development of digital tools and new technologies in the performing arts emerge from this analysis.

#### ***Issue 1: New technologies and the preservation, archiving and documentation of the performing arts***

11 articles deal with the archiving and documentation of the performing arts. Due to their performative nature, their "preservation" cannot be approached in the same way as in the cultural industries or the museum and heritage sector. Because each performance is unique and has an intrinsically limited lifespan, archiving issues are crucial. In addition to presenting the possibilities and limitations of digital media for archiving live performances, some of our research focuses on the use of specific technologies. The need for creators and performers to be aware of the need to digitally preserve their art is emphasized, especially when it comes to preserving art that is "in crisis".

Beyond the actions of cultural professionals, a number of studies have focused on the **role that audiences can play in the process of capturing and documenting performances** in the digital age. Indeed, the authors show that each person who films and photographs becomes a lever for documenting and remembering the artistic performance, individual digital memory replacing the collective historical memory of the 20th century.

#### ***Issue 2: the impact of new technologies on the teaching of the performing arts***

In some cases, the issue of documentation is approached as a preliminary stage of an artistic learning process that can be nourished by it. 39 articles are devoted to this theme of the evolution of pedagogy in the field of performing arts (especially dance and theatre). Most of them specifically examine the impact of new technologies on the way new practices are taught. While some focus on the development of digital tools as part of a migration of teaching to digital spaces as a consequence of the Covid-19 pandemic and imposed social distancing, the majority were published before 2020, acknowledging that this evolution has been accelerated by this unprecedented crisis. Many studies suggest that such an evolution is necessary if education is to **keep pace with the evolution of its target learners**, today's young digital natives.

Many of these works therefore analyze **the construction of a teaching system based on digital media technology** from the point of view of artist-teachers. Certain tools are specifically questioned, such as access to remote dance classrooms through Zoom, the creation of avatars and adherence to the principle of "digital double" technique in multimedia performance, the use of virtual reality, and so on.

Beyond the tools and technologies used, the work focuses on the **consequences of these pedagogical developments**, which require artists to think differently about learning processes, the notion of personal commitment, and the creative and social dynamics of learning. The use of new technologies, especially distance learning, raises a number of paradoxes in terms of proximity/distance and intimacy/sharing. However, a number of studies have shown that with the spread of digital networks, the quality of teaching (of dance) has increased, as well as students' enthusiasm and interest in the classroom; and that this learner motivation has fostered their empathy and creative potential. The latter is further stimulated by the fact that, in this environment of digital technologies, students increase their capacity to become **co-creators of knowledge and praxis**. Technology thus reinforces the virtues of embodied learning. As a result, learning methods are bound to evolve; digital tools offer many advantages, and it seems appropriate to continue practices born out of the constraints imposed during the pandemic.

### *Issue 3: The influence of new technologies on creation, staging and performance*

Of course, the development of technological and digital tools in artistic education also raises the question of the possible renewal of directing, dramaturgy, acting, show design, and art as such.

109 articles (i.e. more than 56% of the collected articles) are devoted to the impact of the new technologies on artistic creation from the point of view of the artists themselves, whether they are playwrights, composers, directors, choreographers or performers, especially in the field of theatre, which is over-represented on this theme compared to artistic disciplines such as dance, opera, music...

There are many areas of research on this creative issue. Some of them deal with the impact of new technologies on the creative process itself, on the work of authors, directors, and choreographers. The **collective and collaborative approach to performance** is particularly explored. Based on specific projects, the papers describe the new tools and methodologies (in which digital technology is central) developed for writing/composing a work, staging it, rehearsing it, and even performing it remotely. The development of digital technology has facilitated collaboration between the different categories of artists involved in a project, both locally and potentially internationally. While the Covid constraint is mentioned by some, it is not the triggering factor for all these reflections, which emerged long before this specific crisis situation.

The use of new technologies raises many questions about their **dramaturgical and aesthetic implications**. Indeed, it leads researchers to question the status of the works created, as well as the evolution of the artistic disciplines themselves, as they increasingly open up to these tools to understand their contemporary aesthetics. In this way, the **ability of artistic expression to transcend the constraints imposed by the new media** is questioned, in order to determine whether digital tools have a tendency to normalize and standardize the artistic experimentation that uses them, rather than allowing the affirmation of the specificity of creations. **The place, practices, and reactions of the performers** themselves within these "digitally enhanced" creations are also analyzed. The presence of technology **thus fundamentally questions the living character of the show, its "liveness"**, when living bodies are linked to virtual bodies in the performative device, or even when no human is present, and machines embody the performance.

It's worth noting that among the many reflections analyzing the complex dialectical relationship between digital and analog in the creation of an artistic performance, a few voices are raised to argue for **the need to restore the human element to its rightful place** in contemporary performance. While Covid has made it necessary to produce and distribute shows online, this transition from analog to digital is seen in some rare research as a temporary disruption that must now allow "human technology" to return to the center, freeing itself from a "digital encroachment" that is considered negative.

Beyond the original creative process, the rise of digitalization is also **redefining the spatial dimension of projects and the works** they produce. This question is defined according to two logics. The first concerns the presence of the actors themselves. While some research questions the characteristics of digital creations designed specifically for online distribution or the constraints involved in digitalizing works for online distribution, others analyze creations that challenge the **paradigm of co-presence** as a condition for theatrical events. The second logic concerns questions of scenography, which is also strongly influenced by the use of digital technologies, especially visual and auditory technologies that allow a redefinition of the performative space. A number of articles describe and analyze specific technologies such as 3D animation, XR (Extended Reality) and VR (Virtual Reality) technologies, either to bring the physical world into digital performance or to facilitate 'in-house' **immersive theatre**.

#### *Issue 4: The digitalization of performing arts from the audience's point of view*

Of the hundred or so articles on the impact of new technologies on artistic creation, 40 deal only peripherally with the impact of the use of such tools on performing arts audiences. Although these are supplemented by 25 research studies that place the audience perspective at the center of their considerations, the total number of articles devoted to this topic is, in the end, relatively small.

Some of these studies analyze **the evolution of the audience's expectations and preferences** in terms of shows, given the digitalized environment in which they evolve. The motivations of audiences to participate in shows using these new technologies are questioned, as well as **the acceptance of new show formats**, in order to find out whether the digital consumption behaviors developed during the lockdowns can serve as a basis for a sustainable theatrical model.

A few reflections evaluate the **potential of certain technological innovations to expand the audience for performing arts**, whether in-person or remotely.

Some show how theatrical creation has had to evolve in response to digital media and the habits and expectations of a connected, playful audience, touching some right in the heart of their homes. Beyond the use of technology in theatrical works, some research questions its usefulness in a more peripheral way, in terms of whether web communication tools and social networks can effectively reach new (especially young) audiences, to **increase participation by diverse audiences, and to combat the aging of performing arts audiences**.

More generally, much of this research is devoted to analyzing audience reception of shows that use digital technologies insofar as they blur the boundaries between the real and the imaginary, between distance and proximity. Again, the focus is either on online shows or on theatrical performances using digital devices. In both cases, the act of watching is evolving as the use of new technologies redefines the perception and engagement of the audience's bodily senses, which become the essence of the performance in addition to the live actors on stage.

The issue here is not only the engagement and satisfaction generated by the integration of certain technologies into shows, but more globally, the relationship and interaction between artists and audiences that the use of NICTs redefines and fosters.

In addition to engaging audiences in the forms of creative participation made possible by new technologies, other research has focused on the ability of these digital tools to immerse the audience in the show, in the creation...and more generally in the artistic experience provided.

Finally, some works have chosen to analyze the impact of these technologies on the definition of the artistic experience offered to the audience. While it has traditionally been recognized that these digital tools have been incorporated into the "experience economy" of live music, their role is also being apprehended in the fields of theatre, opera and dance. It is emphasized that these innovations enable the creation of new types of experiences that are diverse because they are personalized by and for different members of the audience, and therefore ultimately more intimate.

A handful of studies have analyzed the experience of hybrid events, examining the competition or complementarity between theatrical performances in theatres and those broadcast in cinemas.

Some research focuses more specifically on understanding the fully virtual experience and managing the audience's experience in the digital space, especially before and after a show. As rituals play a key role for physical audiences, we need to consider their existence for digital audiences in order to identify coherent paths and trajectories in digital experiences.

#### *Issue 5: the impact of new technologies on the management of cultural structures*

Finally, a very few studies (5) take a managerial perspective, assessing the impact of digitalization on the resale of concert tickets, which disrupts the previous balance of logics of scale, scarcity, and equity, and can lead to a rather categorical change in ticket prices. Some question the use of a shared CRM, enabling a collaborative approach to strategic audience development by a cluster of performing arts companies; another the impact of social networks on the ability of small cultural organizations to attract potential audiences.

### **THEMATIC ANALYSIS OF PROFESSIONAL MEDIA (INITIAL RESULTS)**

Reading and analyzing the professional press seems to raise 4 main issues related to the development of digital tools and new technologies in the performing arts: the transformation of the performing arts, the relationship with the audiences, changes in management systems, and, to a lesser extent, critical views related to digital technology.

### *Issue 1: Transforming live performance through technology*

135 articles place technology at the core of their reflections, examining globally the ways in which digital technology has enriched, transformed, and redefined live performance.

**Technology and artistic creation:** some articles reflect artistic initiatives that place technology at the heart of the original creative process. While it is clear that technology has traditionally been an integral part of the composition of music, especially electronic music, it is also highlighted **that recent innovations, especially AI, can "augment" and energize creative work**. Surprisingly, AI can also be applied to playwriting. More generally, some articles emphasize the capacity of the technological revolution to lead the performing arts into a **new paradigm**, allowing for the hybridization of different forms of artistic expression, but also, more simply, allowing for their renewal to invite new cultural aesthetics. If all the arts are concerned, magic is more specifically mentioned, insofar as connected objects, applications, augmented reality, and virtual reality can affect the art of illusion and deception.

**Show technologies and staging:** A large number of articles emphasize the specificity of shows rich in visual effects developed on stage, whether through live image capture and/or projection during the show. Sound technologies are also mentioned, with particular reference to the advances in sound spatialization made possible by these innovations. These can also be applied to costumes. Of course, there is also mention of the development of **immersive forms of performance through the use of digital sets, 3D technology, augmented reality, and virtual reality in all types of performing arts**. This immersive dynamic can be enhanced by the use of holograms and avatars, whether artist avatars or digital avatars created through 3D animation. Last but not least, the subject of the **metaverse** is increasingly present as a place for the creation of new artistic experiences. These immersive virtual spaces in which one can attend a performance raise questions about the redefinition of the cultural experience and its ability to develop new audiences.

**Technologies and new forms of performance distribution:** beyond the issues raised by the metaverse, the question of the impact of new technologies on the distribution of works is addressed more generally. Even if **television** is far from being the most innovative medium, its role as a potential "savior" of the theatre (by facilitating the connection with the audience, as it did with the cinema) is still being debated. In the end, the constraints of Covid have reawakened the possibilities offered by this means of distribution. As these constraints have encouraged the development of **Internet-based broadcasting of live performances, whether on-demand (VOD) or livestream**, the ability of these new technologies to give live performances a stronger place in society is also much debated, as is the relevance of developing platforms specifically dedicated to live performances. These issues are addressed from a variety of perspectives. The **viability of the streaming business model for live performance has been questioned**, as have the technical conditions that would allow this model to be consolidated. The question of pricing for the consumption of online shows was also raised.

**Technologies and archiving/preservation of live performance:** very few of the collected articles mention the potential of new technologies to contribute to the archiving and preservation of live performance.

### *Issue 2: The challenges of digital technologies in relation to live performance audiences*

85 articles analyze **the impact of digital technologies on audiences** in a variety of ways: **audience expansion and accessibility, interactivity and community building, the redefinition of the relationship between artist and audience, and education**.

Many of the articles begin by emphasizing that digital technology can help **address the current challenges facing the performing arts in terms of accessibility and audience expansion**. In fact, digital platforms and streaming technology have primarily enabled structures to **maintain connections with audiences during the pandemic, but also to reach new audiences**. New digital content and formats, such as digital capsules, were also sometimes proposed by venues and/or artists to maintain contact with audiences at a lower cost than streaming, which not all structures could afford. Digital tools, the use of which increased during the health crisis, have democratized access to cultural productions and can help **make culture more inclusive and accessible**. Shows can now be offered in a hybrid format. They allow audiences who are considered to have little access to culture to take an interest in previously inaccessible arts. For example, live streaming of concerts and plays can **reach audiences around the world** who are unable to attend in person for geographical or financial reasons. It is also now technically possible to attend a show in the metaverse. Digital technology also offers creators the opportunity to revitalize disciplines that have fallen into disuse, and audiences, especially young ones, the chance to **explore** new works and discover new artists. Streaming can also be an **introduction** for the very young,

perhaps encouraging them to go to a show later. A number of articles also look at how new technologies can **increase accessibility for deaf and hard-of-hearing audiences** (also known as "disabled" audiences).

On another level, digital tools have **changed the way audiences consume live performance, interacting with each other, with the show, and with the artists**. Social networks (on which streaming video can be broadcast) **encourage community involvement and reinforce the social aspect of live performance consumption**. They also offer artists new ways to communicate with their audience, and even a means to offer an interactive show to their audience. They can also **influence the choice of shows** for certain audiences. More generally, articles highlight the need to **develop digital communications** to reach specific audiences, particularly young people, an objective to which digital merchandising can also contribute. By offering **enhanced, more interactive and immersive experiences thanks to new technologies**, artists and performing arts organizations are helping to **strengthen the bond between artists and audiences** before, during and after the performance. A number of articles featuring testimonials from artists who livestream their shows (particularly in the fields of stand-up and magic) emphasize the richness of the remote exchange with the audience made possible by the use of interactive video capture. For some, online shows are ultimately more lively than in a physical venue, where people plunged into darkness may be reluctant to participate. If new technologies can lead to new poetics, they can also shake up certain audience inertias.

These tools have introduced new ways for the audiences to experience the show and a **new relationship between the show/artist and the audience** - especially through the co-construction of the performance - and can help to reach younger audiences by offering them experiences that are better adapted to their expectations. In this way, these articles touch on an important theme (but one that is not very present in all the articles collected) concerning the **ways in which new technologies can be used to enhance and enrich the audience experience**, whether physical (for example, thanks to technologies that optimize sound and promote audience immersion) or virtual. However, there are concerns about **maintaining the authenticity and emotional impact of cultural experiences that incorporate these new technologies**. In another area, **data can be used to gain a better understanding of audiences** and their needs, to establish a typology, and thus to offer experiences that are better adapted to each individual.

### ***Issue 3: When digital technology transforms art project management***

58 articles address the relationship between digital technology and the support functions essential to show creation. These include issues related to venues, people and human resources, financial issues, especially the question of artist compensation, and tools to facilitate show and ticketing logistics.

**The venues in which shows are created are becoming larger and more diverse**, thanks in particular to increasingly mobile sound installations. The ways in which shows are viewed have expanded, with greater interaction between audience and show. It is now common to speak of "augmented" shows, of "immersive" experiences (hence the proliferation of show viewing platforms), where the living dimension of the show no longer takes place only during the physical encounter between artist and audience, but in all the stages before and after the show. This issue can sometimes worry industry players, who question the future of physical venues as hybridization or even complete digitalization takes over.

The relationship between digital technology and live performance is also reflected in the human and financial resources allocated to the use of these technologies. This dynamic also affects a certain number of professions that have been transformed by these technologies, such as communication (which has integrated all the management of social networks), or broadcasting and programming professions that have been turned upside down by streaming and viewing platforms such as YouTube.

Among the **financial implications of digital mutations** is that of fair compensation for artists and a balanced distribution between artists, labels, and platforms. In Europe, a European Union decision in favor of artists establishes a proportional distribution between authors and performers, a strong symbol in the face of streaming platforms. The issue of VAT applied to new forms of sports practices and sporting and cultural events, as well as to streaming services, is also at the core of the debates. There are many stakeholders in this new legislation and the argument of the financial equilibrium of the entire sector is put forward. Others mention the use of NFT to better identify and thus compensate those involved in a creation.

But digital technology also means a series of practical tools **to facilitate the logistics of all professions within the performing arts sector**, such as the management of festival flows, ticketing, ticket fraud and ticketing through NFTs, or the wider distribution of shows through a variety of specific or generalist

platforms (which can even manage the entire experience: ticketing, accommodation, transport, merchandising...).

#### ***Issue 4: A critical reading of the relationship between technology and performing arts***

Some thirty articles take a highly critical look at the links between culture and the development of digital technologies. They counter some of the arguments raised above.

Some warn of the **risks associated with the use of certain tools**, notably AI, in particular the violation of image rights that it may entail, as well as the threat it may pose to cultural jobs. There are many debates that counterbalance the opportunities offered by new technologies. The rapid development of new technologies, their use (without sufficient forethought), their growing influence on society... raise questions for artists, practitioners, and journalists alike. During the health crisis, for example, a number of articles expressed concern about **the place of digital giants** in the cultural landscape, following the growth of virtual consumption of shows. They wondered how to protect the public from their omnipresence and ensure a diversity of choice, in particular by offering more sophisticated recommendation systems.

From the point of view of artists and players in the music ecosystem, digital technology can also be perceived as a **brake on creation**. It can compartmentalize practices and genres, and even alienate audiences. By dematerializing all artistic communication and promotion, **audiences far removed from digital technology find themselves excluded from culture**. What's more, digital technology can sometimes be just as **time-consuming for an artist**, who may spend more time promoting than making music. While the development of virtual culture has been essential during the Covid crisis, and while screens and networks have made it possible to maintain the link between artists and audiences and to promote artists, some people insist that the **beauty of the craft** must not be forgotten, defending the virtues of the "technology-free" show, where **the human element takes precedence**.

In the same vein, other articles fear **that the virtual consumption habits developed by audiences during the crisis will have a detrimental effect on post-crisis attendance in performing arts venues**, especially among younger audiences, and advocate a return to the physical sphere (although this fear has been allayed in the years since the pandemic).

On another level, stakeholders of the field of performing arts are asking themselves how they can act in favor of the environment. This means, above all, reducing energy consumption and wastage of sets, and putting an end to territorial exclusivity, which prevents a show from being performed several times in the same territory. **As digital technologies are very resource-intensive**, some stakeholders speak of the "decarbonization" of culture. The constraints of 2020 seem to have acted as a catalyst for global, coordinated action by all stakeholders in the cultural sector. A more global reflection has also begun on reducing the number of performances. Although this path has been tentatively mentioned, no concrete action has been taken so far.

## **CONCLUSION**

Observing change on an industry-wide scale means freezing a situation at a particular moment in time. By observing the issues raised in two bodies of text, this study paints a recent, vibrant, and complex portrait of the performing arts industry. On the one hand, the issues raised by the academic text corpus revolve around storage and archiving, teaching, staging and performance, audiences, and venues. On the other hand, the issues raised by the professional press corpus are more concerned with the relationship between digital and artistic creation, between audiences and artistic creation; they underline the impact on management tools and also raise a critical reading of this rise in power.

Following this observation, this research will be extended by considering the collection of content published in non-digitalized professional media, by updating the database of scientific articles, by analyzing all this content (articles or article summaries) also with the help of new technologies (text analysis software), and finally by highlighting the convergences and divergences between the themes identified in these two bodies of text. For example, while it's interesting to see that both corpuses focus on the link between performing arts, technology, and the experience of the audience, it remains to be seen why the academic literature focuses on audiences seen primarily as learners to whom an aesthetic attitude can be imparted, while the popular press approaches audiences as consumers to be converted into spectators. From this comparative analysis, a number of research avenues could be defined that would allow us to move forward scientifically towards a better understanding of the issues at stake between technology and the performing arts.



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