Critical assessment of the impacts of digital technological developments on opera companies and consumers through production and consumption

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Abstract: This article critically assesses the impact of digital technological developments on opera companies and consumers. It examines the production and consumption implications, with a focus on streaming opera and audience engagement. The study highlights the transformative role of digitalization in the opera industry and its effects on traditional viewing relationships. It discusses the challenges faced by opera companies in adopting digital platforms and the potential benefits in reaching a wider audience. The article also emphasizes the need to attract new audiences, particularly the younger generation, and explores strategies for making opera more accessible. Overall, it provides a comprehensive analysis of the evolving landscape of opera in the digital age, shedding light on the opportunities and challenges that arise from digital technological advancements.

1. Introduction

This paper discovers the advertising effect of digitalization in the cultural industry and a critical analysis of the impact and future trends from the perspective of consumers and the production companies involved, particularly in (Western) opera. The evaluation is based on a crucial assessment of the relevant literature and comprehensive initial research consisting of a restrained quantity of casual interviews with opera managers and experts.

The focus of academic research in the field of opera revolves around satisfaction[8] , perceived quality[3], and servicescape[19]. Moreover, the opera industry is currently undergoing a digitalization project and transitioning to a multichannel approach due to the recent groundbreaking advancements in streamed opera [4,9].

With the rapid development of modern information technology and multimedia technology, the exploration and discussion around the influence and integrated application of technology and new media on theatre creation also has reached a new level of fervour and height. The opera as a product offers a highly immersive experience [16]. Consequently, studying the consumption experience within this domain is particularly valuable, as it has received limited attention in research thus far. While traditional performance viewing is more of a one-way output, one-way acceptance and understanding relationship, digital technology has changed the traditional viewing relationship.

2. The survival of opera in the digital age

Starting with a seeming paradox, from December 2006, the rise of 'Live in HD' broadcasts from the Metropolitan Opera (and shortly thereafter, other major opera houses) led some commentators to renew their fears for the survival of opera. From the early days of sound, light and electricity on the theatre stage to the present day, with the progressive use of real-time video, holographic projection and virtual reality, the integration of new technologies with the art of opera theatre is not new to theatre creators. Indeed, the integration of new technologies into the world of opera theatre has a rich and evolving history, transforming the way stories are told and enhancing the overall theatrical experience.

Grotowski's perspective that "theatre is what happens between the audience and the actors, everything else is a supplement" highlights the unique nature of theatrical experiences. However, applying widely accepted advertising and marketing practices to the opera industry has been challenging. This is primarily due to the distinct characteristics of the opera business, including significant barriers to product development and the complexities arising from balancing the cultural mission of opera institutions with more customer-centric approaches in production planning [6,17].

From a product-centric viewpoint, opera performances are known for being highly intricate and costly endeavors within the performing arts sector[13]. They typically involve a large number of individuals, including orchestra members, chorus singers, stage directors, crew members, props staff, venue personnel, managers, and administrative officers. New manufacturing could additionally mean fees associated with innovative paintings and the production of levels and costumes [1,18]. Besides, building and renovating a theatre also requires a significant investment.

Research findings indicate that the process of digitization has not led to the creation of new opera audiences; instead, it has served as an extension of the opera experience for the existing customer base. Rather than being a catalyst for audience expansion, digitization seems to have functioned as a means to enrich and extend the experience for those already familiar with opera. Digital platforms have served as additional channels for existing opera enthusiasts to access content conveniently. The nature of opera, with its cultural and educational prerequisites, can create barriers for new audiences attempting to engage with the art form digitally. The lack of familiarity with opera's nuances and historical context may hinder the growth of a broader viewer base.

Recently, the concept of "metaverse" has been introduced in the field of opera and theatre arts, forming a "digital person" with a high degree of proximity to a natural person in terms of appearance, form, voice, facial expressions, etc., and enabling real-time interaction. The metaverse allows for the creation of digital personas that closely mimic real individuals in terms of appearance, voice, and expressions. Advanced technologies, including realistic avatars and voice synthesis, contribute to a high degree of realism. Facial expressions and emotions can be intricately replicated, providing digital personas with the ability to convey a wide range of emotions, enhancing the overall expressive capabilities of virtual performers. Real-time interaction opens up new possibilities for audience engagement, allowing spectators to actively participate in the performance, influencing the narrative, or even interacting with virtual characters in meaningful ways.
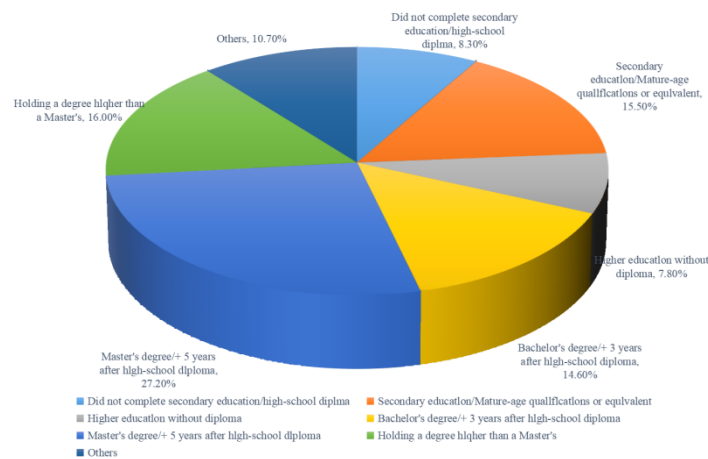
Figure 1: The audiences' education level[2]

The majority of opera's consumer base believes that: opera's complex forms of expression and multicultural, international and transnational character are more in keeping with their identity and tastes [5]. Opera distinguishes itself through its elaborate and multi-faceted musical compositions, compelling storytelling, and intricate character evolution. The audience's inclination towards opera implies a recognition and fondness for art forms that present a profound and intricate engagement with their layers of depth. Incorporating a diverse array of cultural, historical, and literary influences is a characteristic hallmark of opera. Performances often weave narratives from various cultures and historical periods, appealing to individuals who seek out and appreciate a rich tapestry of global-inspired stories. The multicultural and international essence inherent in opera allows it to surpass both geographical and cultural confines. This unique quality has the potential to draw in audiences with an appreciation for a wide-ranging and inclusive portrayal of human experiences. The global and diverse nature of opera contributes to its attractiveness for those who value a broad and encompassing representation within the realm of artistic expression.

Opera houses and opera house brands have become an integral part of luxury marketing strategies, as evidenced by collaborations with renowned designers who create costumes for opera productions[13]. For instance, the 2017 opera-inspired collection by Dolce and Gabbana, presented at La Scala theatre in Milan, exemplifies this trend. This is a side-effect of the fact that, to date, opera performances still suffer from the problem of high ticket prices due to high costs that plague financially sensitive users. The ongoing issue in opera performances arises from the sustained challenge of high ticket prices, a result of the substantial financial burdens linked to production costs. This poses a hurdle for individuals with economic sensitivity, making attendance a challenging prospect for them.There is a high degree of overlap between the consumer base of fine wine and the audience of opera, and according to data, which is shown in figure 1, the consumption of large amounts of entertainment and recreational types requires a certain level of intellectual and cultural reserves and aesthetic taste [2]. Indulging in a wide array of entertainment and recreational activities necessitates possessing a particular threshold of intellectual and cultural reserves, coupled with a discerning aesthetic taste. This multifaceted requirement speaks to the inherent connection between one's cognitive capacities, cultural awareness, and the ability to appreciate the nuances of various forms of entertainment. Aesthetic taste involves an appreciation of the beauty, form, and artistic elements within different types of entertainment. It goes beyond mere enjoyment and involves an understanding of the artistic choices, composition, and creative expressions employed in the content. In summary, the consumption of a diverse range of entertainment and recreational activities is not merely a matter of quantity; it involves a nuanced interplay of intellectual engagement, cultural awareness, and aesthetic sensibility. Building and cultivating these reserves contribute to a more

enriching and satisfying experience of the diverse forms of entertainment available.

High-end tickets for opera performances cost around €200-500 per ticket. It is puzzling that, although more and more entertainment offerings are distracting people's attention and time, data indicating that the number of opera performances has not decreased in recent decades, but rather that several new theatres are being built [6]. The establishment of new theaters introduces an intriguing dimension to this narrative, indicating not only a consistent demand for opera but also an investment in the infrastructure aimed at supporting and enriching the experience of this classical art form. The decision to construct additional opera venues amid the changing dynamics of entertainment prompts inquiries into the evolving patterns of cultural consumption, the ability of opera to adapt to contemporary audiences, and the dedication to preserving and promoting this culturally rich artistic tradition. Moreover, this trend challenges established assumptions regarding the impact of digital entertainment on traditional art forms. Despite the transformative influence of digital platforms on content consumption, the enduring growth and presence of opera suggest a harmonious coexistence between traditional and modern forms of entertainment. The building of new theaters symbolizes a belief in the enduring significance and appeal of the opera experience, encouraging an exploration of the factors steering this counterintuitive trend. In essence, the juxtaposition of a digital age characterized by attention-diverting entertainment options with the sustained prevalence and growth of opera performances, coupled with the construction of new theaters, underscores the complexity and dynamism of cultural preferences. It invites further investigation into the factors contributing to the enduring allure of opera in an ever-evolving entertainment landscape.

3. Is opera still irreplaceable when new issues arise?

Looking back at the history of opera, it is as if there are issues that have not been addressed. The early days of opera carried the label of an aristocratic culture that could not accommodate the lower-income groups to enjoy opera performances[9]. The financial barriers presented by high ticket prices, extravagant productions, and the aristocratic associations of opera created a cultural divide, making it challenging for those with limited financial means to partake in the immersive experience of attending opera performances. Moreover, the venues themselves, often located in prestigious areas and adorned with lavish architecture, reinforced the aristocratic aura surrounding opera. This spatial and aesthetic dimension further contributed to the perception of exclusivity, making it difficult for individuals from lower-income groups to feel a sense of belonging within the opera-going community. In contemporary times, opera houses have evolved into expansive venues designed with distinct areas that facilitate communal viewing of performances. This arrangement promotes shared experiences and enables visibility and recognition between individuals from different social strata, including elites and the general public [10]. Over time, efforts to democratize access to opera and make it more inclusive have been undertaken. However, the historical association of opera with aristocratic culture has left an indelible mark on its perception, requiring ongoing initiatives to break down socio-economic barriers and cultivate a more diverse and accessible audience base. Despite these challenges, the evolution of opera has seen attempts to redefine its cultural identity, fostering inclusivity and ensuring that individuals from all walks of life can partake in the rich artistic legacy of this genre.

Along with this comes the problem of an ageing audience. From figure 2, you can see that over fifty per cent are older people enjoying the opera performances, and it is rare to see at least a young loyalist. Attracting new users and nurturing young opera lovers is only the first problem facing opera in the digital age [1]. Efforts to address this challenge extend beyond a numerical quest for expanding the younger audience base; they require a thoughtful and strategic approach to bridge the gap between opera and the preferences, lifestyles, and expectations of contemporary youth. This involves not only reassessing marketing strategies but also exploring innovative ways to present opera that resonate

with the cultural sensibilities of the younger demographic. The aging demographic poses a critical juncture for the opera industry, prompting a reevaluation of its engagement strategies to ensure the art form remains vibrant and connected with evolving cultural dynamics. The challenge extends beyond statistical representation, aiming to establish a meaningful and lasting relationship with the younger audience, securing the future of opera as a cherished and relevant cultural pursuit.
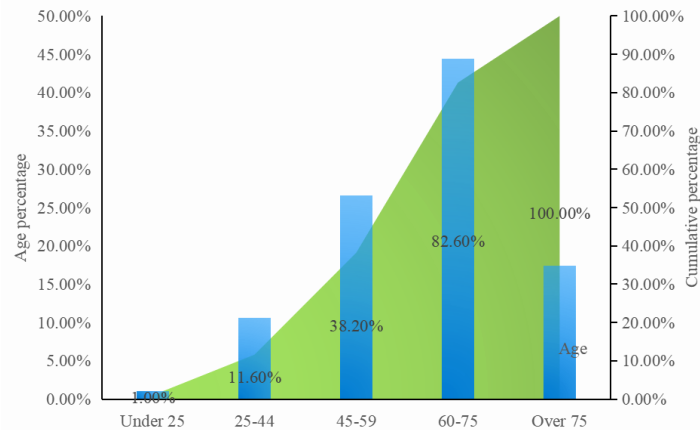

Figure 2: Age distribution of opera's audiences [1]

The Metropolitan Opera in New York made history in 2008 by becoming the first opera house to introduce a streaming platform [11]. "Subsequently, other renowned opera houses such as the Bavarian State Opera in Munich, the Teatro Real in Madrid, and the Wiener Staatsoper in Vienna followed suit. Concurrently, professional opera platforms like Operavision have gained public attention." As a result, opera houses are grappling with the question of whether they should invest in streaming, which can be a costly endeavor to implement [12,14,15]. However, while digital opera offers a convenient and cost-effective alternative, it also raises questions about the impact on the traditional live opera experience. The tangible elements of a live performance—the energy of the audience, the acoustics of a physical space, and the immediacy of the connection between performers and spectators—remain distinctive aspects that digital platforms may struggle to fully replicate.This novel approach to experiencing opera has the potential to reshape the relationship between opera houses and their audience[14,15]. Hence, it is crucial to comprehend how viewers perceive and respond to the opera streaming experience, which differs from the traditional "live" opera experience and can be accessed from any location with electronic devices, such as the comfort of one's home.One of the primary advantages of digital opera lies in its ability to break down geographical barriers. Enthusiasts from diverse locations, irrespective of their proximity to traditional opera houses, can now access and enjoy performances with ease. This inclusivity broadens the audience base, reaching individuals who may have otherwise been unable to partake in the richness of opera due to travel constraints or geographical limitations.Digital opera may replace the traditional way of seeing a performance. A platform for many enthusiasts who are unable to travel to offline theatres to attend performances, allowing them to participate and have the same experience for a small membership fee. 213 responses for a questionnaire were collected by Wiener Staatsoper (153) and Operavision (60) for the number of streamed and lived operas watched per year, and the result is shown in figure 3. Streaming opera does not pose a threat to lived opera performances, but we can see from the data that the future development of live opera still needs to face great challenges[15]. Furthermore, cultivating new generations of opera lovers becomes imperative for the sustained development of live performances. The main ways to encourage young audiences to appreciate and participate in opera include educational programmes, outreach programmes and the incorporation of innovative elements.
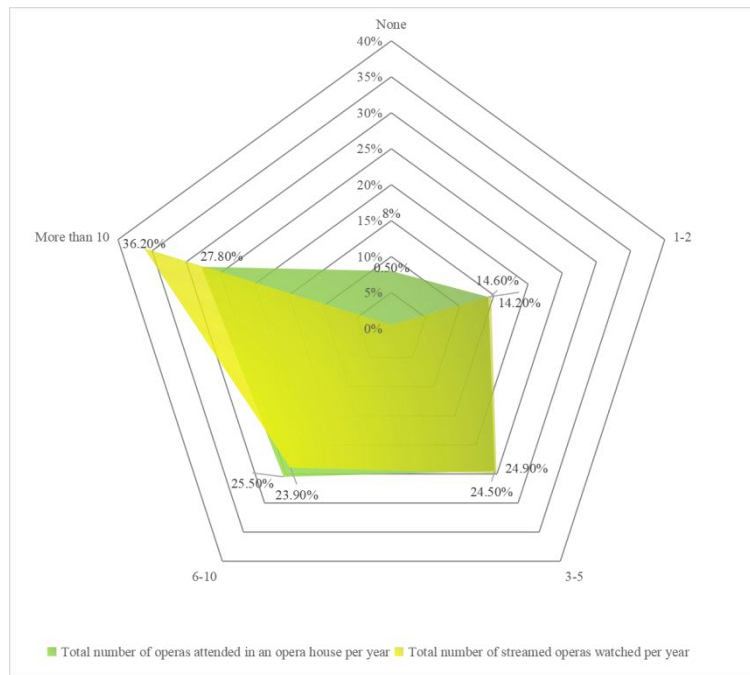
Figure 3: Total number of streamed and lived opera watched per year (Wiener Staatsoper and Operavision, 2023)[14,15]

According to a study by the Vienna State Opera, an analysis of the core elements that attract opera audiences indicates that consumers have a strong desire for knowledge, enrichment, and intellectual stimulation, which is divided into the following three points [14,15]. Firstly, looking at a streamed opera lets in visitors to relax, get away and neglect about each day realities. The overall performance offers them the possibility to revel in feelings that vary over an extensive spectrum. When engaging with streamed opera, viewers experience various dimensions of value. They appreciate the grandeur of the artwork and performance conveyed through the music, voices, staging, sets, and costumes[14,15]. As audiences engage with streamed opera performances, they are presented with a unique opportunity to immerse themselves in a rich tapestry of emotions that span a broad spectrum.This aesthetic dimension contributes to their overall enjoyment. Secondly, the epistemic dimension comes into play, as streaming opera allows audiences to engage in intellectual enrichment, reflection, and introspection. The artists and the production itself become central to this evaluation. In a broader sense, the experience of streamed opera can serve as a significant intellectual stimulus for viewers[14,15]. As audiences engage with streamed opera, the intellectual dimensions of the art form come to the forefront. The intricacies of the narrative, character development, and thematic elements invite viewers to delve into the intellectual depth of the performance. Operas often weave intricate stories drawn from literature, history, or mythology, prompting viewers to reflect on the broader cultural and intellectual contexts that shape the narrative. Streamed opera provide a method for post-performance discussions and analysis. Viewers can explore critical reviews, scholarly articles, or participate in online forums to exchange thoughts and insights. This communal aspect of intellectual discourse contributes to a shared intellectual experience, creating a virtual space where enthusiasts can come together to discuss and dissect the various layers of meaning embedded in the opera.Thirdly, there is a functional dimension to streaming opera, where viewers benefit from enhanced visibility of the lead singers' facial expressions, which are often emphasized in audio-visual productions. Lastly, streaming opera offers the convenience of flexible scheduling, allowing viewers to appreciate the ease and accessibility it provides. This convenience extends beyond the actual viewing time. Streaming platforms often archive performances, enabling viewers to revisit and enjoy operas at their leisure.

This archival feature enhances the overall accessibility of opera, empowering audiences to build a personal repertoire of favorite performances that can be revisited whenever they choose. "Given these reasons, it is evident that good value should be regarded as a multidimensional concept [14,15]."

4. New challenge and chance

In an effort to make opera more accessible to a broader audience, opera managers and artists recognize the importance of "opening" theaters and exploring socially inclusive approaches. This may involve offering low-cost or free performances that specifically target students, workers, and even tourists [7]. The aim is to break down barriers and make opera more inclusive, reaching a wider segment of the population. In addition, several product innovations have been used to achieve the aim of restoring mass audiences. For example, instead of watching an entire opera, the most popular pieces will be packaged in a concert, including a selection of famous arias. The combination of classical and popular music has also attracted a younger audience (the "Three Tenors" and "Pavarotti and Friends" events, Andrea Bocelli, Sarah Brightman, Rebecca Newman, etc.) This hybridization not only attracts a younger audience but also appeals to individuals who may not have initially considered themselves opera enthusiasts. The synergy of classical and popular music creates a dynamic and diverse musical experience, expanding the appeal of opera to broader demographics. These strategies collectively represent a proactive shift within the opera industry, acknowledging the importance of adapting to contemporary audience expectations and preferences. By breaking down financial, cultural, and perceptual barriers, opera managers and artists are working towards creating a more inclusive and diverse opera community. The combination of affordability, innovative programming, and a fusion of musical genres reflects a commitment to revitalizing opera and ensuring its continued relevance in the evolving landscape of performing arts.

Streaming applications in the digital age will not replace live performances in opera houses but could attract a new group of opera lovers and users. Streaming opera will bring a more convenient and comprehensive viewing experience, allowing people to easily watch opera productions from around the world in different languages and periods at home. New works are presented, and people have more channels to discover and enjoy them.

Introducing paid streaming options for opera performances can serve as a means for opera houses to generate additional revenue, particularly in light of the uncertainties brought about by the COVID-19 pandemic. The pandemic prompted opera houses to initially stream performances for free as a way to maintain connections with their audiences. Faced with lockdowns, travel restrictions, and the closure of performance venues, opera houses recognized the need to adapt swiftly to the changing circumstances. Streaming performances for free became a strategic response to the challenges posed by the pandemic, ensuring that opera enthusiasts could still engage with their beloved art form from the safety and comfort of their homes. However, there is now a growing trend towards charging audiences for streamed opera experiences. For instance, the esteemed Liceu in Barcelona has recently introduced a paid subscription model for streamed operas, marking a significant departure from its historical practices at the beginning of the 2021/22 season[15]. Nevertheless, the profitability of this broadcasting model needs to be carefully assessed, considering the substantial investments it entails. Both opera houses and streaming platforms must also carefully consider pricing strategies for streamed performances and gauge the audience's willingness to pay for such experiences [14,15]. The investment considerations for opera houses venturing into streaming include the costs associated with high-quality audio and video production, the utilization of cutting-edge streaming technologies, and potentially securing rights for digital distribution. These financial commitments are critical factors in determining the overall viability of the streaming model. Opera houses need to weigh these costs against potential revenue streams, considering factors such as subscription fees, sponsorships, and

partnerships. Understanding the audience's willingness to pay for streamed performances is a key component in shaping pricing strategies. Conducting market research, analyzing consumer behaviors, and considering the economic realities of the target audience all contribute to making informed decisions. Flexibility in pricing models, such as offering tiered subscriptions, one-time purchases, or bundled packages, allows streaming platforms to cater to diverse audience preferences and financial capacities.

5. Conclusion

This paper analyses the impact of digital developments on opera through the survival of modern opera, the limitations of new technologies in opera media, audience distribution data, changes in theatre business models, and the role of streaming media for new customers. And the future challenges and directions the opera industry will face in the data age.

The rise of new media does not really threaten the opera industry, and the primary issue that needs to be addressed is the contradiction between the cost of theatre production and the imbalance in revenue. Not precisely an outstanding investment compared to other arts and cultural industries. The benefits of digitalization have been minimal and have not generated new opera audiences but instead increased costs, which we don't want to see.

The construction of small theatres has become the mainstay of current live opera performance productions. Digital opera has the potential to significantly boost consumption levels and foster brand loyalty among consumers from middle-class and average-income social groups, as well as those residing in geographically marginalized areas, including opera enthusiasts in second-tier cities. By leveraging digital platforms, opera houses can reach and engage with a broader audience, providing access to high-quality opera performances regardless of geographical limitations. This inclusivity can cultivate a sense of belonging and appreciation among traditionally underserved opera enthusiasts, leading to increased consumption and stronger connections with the opera house brand.

In the early 21st century, the advent of digital technology has provided opera with newfound spatial and conceptual flexibility. However, despite these advancements, the persistent challenge lies in the limited expansion of the live theatre audience as a result of these technological developments. Addressing this issue and finding ways to effectively engage and attract new audiences to live opera performances should be a primary focus of attention.

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