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DIGITAL MULTIMODALITY OF MUSEUMS DISCOURSE DURING COVID-19 PANDEMIC

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COVID-19 pandemic triggered radical changes and transformations in modern world, business, professional fields, communication including. In the wake of lockdowns and quarantines museums had taken a hit too. Museums had to remain accessible and visible, at least in the digital domain, therefore they had to shift to virtual realm, to offer digital services, to increase their activity in social media. Museums faced a number of challenges like dealing with global digital audience, cognitive modelling of the online content and online user. Their efficiency in the digital domain was different, so museums evidenced 10 - 200% increase of online visits and growth of global digital audience. Due to implementation of digital technologies small local museums made a breakthrough to multimodal domain and received international recognition. In pre-pandemic world, museums had been working on their virtual environment, opened virtual-real museums and extended multimodality of exhibitions, making visitors impressions multisensory. During the pandemic virtual exhibitions, virtual tours, films, education material have become more multimodal and interactive. In films and virtual tours the focus was on stories not on 3D image of the exhibits and a standard 360 tour only. They experimented with modes and conquered new media, used multimodal storytelling. Museums tried to create a sense of presence and place and to relocate online visitors from their homes to museums. To encourage children, museums implemented gamification and edutainment strategies, created virtual games. Museums started a new trend – collecting online (collecting COVID-19, BLM), creating Big Data and digital collections which might be used for multi-vector multidisciplinary research. Digital multimodality might become an indispensable component of museum online landscape in the post-pandemic world.

Keywords: *museum, multimodality, online landscape, digital audience, social media, virtual*

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ЦИФРОВА МУЛЬТИМОДАЛЬНІСТЬ У ДИСКУРСІ МУЗЕЇВ ПІД ЧАС ПАНДЕМІЇ COVID-19

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Пандемія COVID-19 спричинила радикальні зміни і трансформації у сучасному світі, вплинувши на різні види бізнесу, професійної діяльності, комунікацію тощо. Музеї, які були зачинені під час локдауна, зазнали збитків під час карантинних обмежень, були змушені розширити віртуальну комунікацію, збільшити активність у соцмережах, урізноманітнити цифрові послуги. Всі музеї констатували збільшення онлайн відвідувань на 10-200%. Завдяки цифровим технологіям деякі маленькі музеї зробили цифровий прорив і стали відомими у міжнародному масштабі. До пандемії деякі музеї почали створювати свій імідж у віртуальному просторі, розширили мультимодальність виставок, їх мультисенсорність. Під час пандемії мультимодальність та інтерактивність онлайн виставок, віртуальних екскурсій, фільмів, освітніх матеріалів помітно зросли. Музеї експериментували з новими медійними продуктами, використовували мультимодальний сторітелінг, створювали ефект присутності і простору, намагаючись імпортувати онлайн відвідувачів з дому в музеї. Для дитячої аудиторії музеї використовували стратегії гейміфікації і розважального навчання. Під час пандемії музеї започаткували нові колекції, матеріалом яких стала цифрові дані про COVID-19, BLM, що може стати об'єктом цікавих міждисциплінарних досліджень. У пост-пандемійному світі цифрова мультимодальність може стати невід'ємним компонентом музейного онлайн ландшафту.

***Ключові слова:** музеї, мультимодальність, онлайн ландшафт, цифрова аудиторія, соцмережа, віртуальний*

ЦИФРОВАЯ МУЛЬТИМОДАЛЬНОСТЬ В ДИСКУРСЕ МУЗЕЕВ ВО ВРЕМЯ ПАНДЕМИИ COVID-19

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Пандемия COVID-19 стала причиной радикальных изменений и трансформаций в современном мире, затронув самые разные виды бизнеса,

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Digital Multimodality of Museums Discourse During COVID-19 Pandemic [Cyfrova mul'tymodal'nist' u dyskursi muzei'v pid chas pandemii' COVID-19] (in English)

профессиональной деятельности, коммуникации. Музеи, вынужденные закрыться во время локдауна, подчинившись всевозможным ограничениям во время карантина, были вынуждены перейти к виртуальной коммуникации с посетителями, расширить свое онлайн присутствие, повысить активность в соцсетях, заметно диверсифицировать свои услуги. Музеям пришлось столкнуться с рядом вызовов, среди которых главными оказались общение с онлайн аудиторией, моделирование онлайн контента и онлайн посетителя. Все музеи констатировали увеличение онлайн посещений на 10-200%. Благодаря использованию цифровых технологий, даже некоторые малые музеи смогли совершить технологический прорыв и получили международную известность. До начала пандемии музеи начали работать над своим имиджем в виртуальном пространстве, создавать виртуальные музеи, расширили мультимодальность выставок, их мультисенсорность. Во время пандемии мультимодальность и интерактивность виртуальных выставок, виртуальных туров, фильмов, образовательных материалов заметно возросли. Музеи экспериментировали с новыми медийными ресурсами, использовали мультимодальный сторителлинг. Музеи прилагали усилия к созданию эффекта присутствия и пространства, пытаясь переместить онлайн посетителей в музей. Для привлечения детей музеи использовали игровые формы, стратегии развлекательного обучения. Во время пандемии музеи начали создавать новые коллекции онлайн данных, прежде всего о COVID-19, BLM, что может стать объектом различных мультимедийных исследований. Цифровая мультимодальность может превратиться в неотъемлемую часть музейного онлайн-ландшафта.

***Ключевые слова:** музеи, мультимодальность, онлайн ландшафт, цифровая аудитория, соцсеть, виртуальный*

Introduction to the problem

COVID-19 triggered radical changes in the world, transformed business, professions and communication. Museums all over the world had taken a hit too, the smallest ones suffered most, but all of them tried to adapt to new normality. UNESCO have identified over 800 individual actions by museums and galleries in response to the pandemic [King 2021]. During the pandemic museums went on supporting education, promoting culture and the Human Experience [Facing Challenge 2020], communicated to research [Kahn 2020].

The coronavirus pandemic has put the transformation of museums' missions for the digital age front and center [Grant 2020]. The discussion about correlation of physical and digital museums can be traced back to 2010 [King 2021], and even further, to the concept of Malraux's notion of a 'museum without walls' (1947). Whilst virtual and physical spaces do have uniqueness, they are nevertheless complementary and mutually supportive, overlapping in many ways

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[King 2021]. The pandemic accelerated the digitization of world cultural treasures, new items being added at a faster rate. Nowadays people can enjoy digitized museums' treasures from home [Panetta 2021]. Museums increasingly are behaving almost like media-production companies, seeking to tell the stories behind their collections and exhibits in ways that entertain, as well as educate [Grant 2020].

In *pre*-pandemic world museums had been working on their online environment but their digital content was not as significant as during the pandemic.

COVID-19 pandemic accelerated the shift to virtual realm. Museums had to cope with closures to the public, find the ways to adapt to the crisis and new normality, become more flexible and be ready for re-openings. Museums had to look for digital ways to communicate with members and visitors, to introduce digital multimodality. Network of European Museum Organizations (NEMO) launched reports on the topic. Almost 80 % of the museums increased their online presence, their online activity, visibility of digital cultural heritage on the Internet, diversified the services provided. Over 30 % of the museums have changed staff tasks to add to the digital team. 16 % of the museums have increased their budget for online activities. More than 40 % of the museums noticed increased online visits, 15 % of the museums claimed a 25-35 % increase. 13 % reported an increase of 40-55 % and 10 % of the responding museums reported an increase between 60 % up to 150 %. 5 % of the museums even reported an increase of over 200 %. By March 2021 surveys of the world's top 100 most visited art museums indicated a 77% decrease in visitation numbers compared to the preceding year [Krishna 2021]. Over 70 % of respondents reported their museum has began to use social media much more than before. Almost 80 % of the respondents stated their museum used Facebook mostly, almost 20 % used Instagram. Museums employed TikTok and YouTube accounts as well. Plurality of media and increased interactivity made museums ethically exposed and socially challenged. Though many of the initiatives were born out of survival [Richardson 2021], museums managed to become multimodal digital entities during the pandemic. The online exhibitions were presented in a variety of different ways using images, video, audio, text, social media, ranging from linear presentation which gave visitors little capacity to navigate freely to the full freedom of a Virtual Reality tour. So online participation of visitors and interactivity increased dramatically. Many small local museums evidenced the increased number of

visitors and international recognition. Museums made esthetic, cultural and educational contribution to online landscape, to interactive learning experience. In post-pandemic world online museum communication might be the indispensable component of the new museum landscape.

Purpose of the study and data collection

Digital multimodal services of museums are of interest in terms of multimodal communication, multimodal education, Multimodal Discourse Analysis (MDA), Multimedia Storytelling [Handbook of Research ... 2020], Landscape Theory (Linguistic Landscape, Soundscape, Online landscape, Museum Landscape), Multisemiotic analysis. The research is based on Multimodality, Grammar of visual design. Modern multimodal analysis is grounded on seminal works of Gunther Kress [Kress 2010], Theo van Leeuwen [Kress, van Leeuwen 2001] and other scholars [The Routledge Handbook of Multimodal Analysis 2009]. The research data is retrieved from the websites and social media accounts of the world museums.

Research findings

For decades, cognition and perception in the museums have been based on viewing only. Museums of musical instruments in Brussels [MIM] and Munich [Musical instruments] where visitors could see the unique instruments and listen to their musical extracts remained exceptional in terms of audio-visual encounters. Since 2010 museums of modern art have extended the multimodality of the museum experience making it multisensory [Obrist 2017; Medina 2013]. The scope of exhibitions involving other senses and channels of information perception (olfactory, gustatory, kinesthetic) increased. Museums used scientific approach, experimented with data, biodata including. Some exhibitions at Tate Gallery, Smithsonian Museum and others [Can Smell be ... 2012; Touch, smell 2015; The Art of Scent... 2012, There's Something in the Air – Scent is Art, 2015], innumerable *perfumances* in France with renowned perfumery traditions at the background, entailed new research projects, encouraged interest of ordinary people in experiments. Olfactory impressions are leading within new art, therefore the world witnessed a boom of diverse exhibitions on scents, aroma, smell and unique 'scents narrative'. Young reseachers went further and opened new perspectives for the research of disputable esthetics but of potential practical value [Smell Me ... 2012; Lenanton 2014; Caro Verbeek 2021; Quenqua 2015].

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So some of the modern museums turned into laboratories on display. Multimodality and interactivity became focus points of those exhibitions. Some projects brought to life new tools, new graphs, new terms (*smellscape*, *soundscape*), new research of enormous practical value in the urbanized world [How to Explore; Henshaw, 2014; Speed 2014].

Some interesting museum exhibitions are at the crossroads of art, education and science, for instance, '*Gestures – in the past, present, and future*' in Berlin organized by UCL Center of Multimodal Research of UCL Institute of Education (London). The exhibition is linked to the MANUACT project and presents current research on gesture through artistic installations and interactive exhibits. It is the first ever exhibition that traces human gestures as a means of communication [Gestures 2019]. It is a presentation of multimodal communication potential and achievements to the public.

Some museums went online and turned partially digital/virtual in pre-pandemic world, opened virtual-real Museums of Art [Digital Collection; Digital exhibition; IMPERIAL IMPRESSIONS; VR Museum of Art; Virtual Museum]. Bristol museums offered a range of online exhibitions. The exhibits are different, including monumental art (*Colston Statue*), miniature masterpieces from Japan, Japanese prints, haiku, exhibition of photos (*Empire through the lens*). The project *Doris the Pliosaurus* offered diving to 150-million-year-old Bristol Jurassic seas with photos of fossils of the unique specimen. It took specialists 10 years to prepare that multimodal exhibition. Noteworthy, the focus of the research and exhibiting was also multimodal: 'Super Senses – Sight – Big eyes at the side of her head = wide field vision; Smell – Nostrils adapted to channel water = super sense of smell; Sound – No ear bones = no hearing, but she might have been able to feel deep sound vibrations' [Bristol museum].

Virtual Multimodal Museums (ViMM) is the project on digital cultural heritage with the goal to bring Europe and the other world together. The distinctive feature of the project is the retrospective view on masterpieces and wonders of European civilization, animated history of architecture wonders construction. One of the animated stories is the bridge construction in Prague in the 14th century [THIS ANIMATION ... 2020]. Another ViMM project was initiated by Greece to remind modern people about the greatness of the civilizations of the past via digital maps and pictures [ANCIENT ART], to highlight five of seven wonders of the Ancient Greek civilization with the map

and infographics to emphasize the importance of those engineering and architectural achievements [ANCIENT GREECE].

Other museum events related to ancient civilizations tend to acquire multimodal dimension too. For example, 3 April 2021 Egyptians witnessed astonishing historical procession when 22 mummies of the best known and the most distinguished pharaohs (18 kings and 4 queens) were relocated from the world famous museum in Cairo to their new resting place – the Royal Hall of Mummies at a new National Museum of Egyptian Civilization. The lavish Pharaohs' Golden Parade was directed and staged as a multimodal show to stress the greatness of ancient Egyptian civilization. It was unique mix of respect for traditions of ancient civilization and technological achievements of modern civilization: ancient mummification traditions were secured and supported by nitrogen-filled boxes to protect mummies against external conditions, to guarantee temperature and humidity control; coffins were placed on vehicles designed to resemble the ceremonial boats used to transport pharaoh's mummy to the tomb, painted gold and blue, featuring the winged sun, the symbol of royal power; replica horse-drawn war chariots convoyed the mummies; the road was repaved to make pharaohs' journey smooth [Cascone 2021; Hussein 2021]. Hundreds of performers in ancient Egyptian costumes were involved, horse mounted police in modern ceremonial uniform added security and respect to the pharaohs. There was salute and laser show. The Parade was streamed online so Egyptian civilization enthusiasts and fans all over the world could watch the spectacle. The modes (symbols of ancient Egyptian civilization, symbolic colors (blue and gold), geometrical shapes of the vehicles to imitate ancient boats, historical costumes, revival of the ritual of ancient funeral procession) and media (TV broadcast, online stream, numerous photos online) prove that museum event was multimodal.

The website *Monumental IDEAS* was designed to familiarize young generations with monumental art and world heritage. It combines digital sightseeing / virtual visit to monuments and museums, a game and Virtual Steam Learning. The project utilizes tools in the virtual environment. LINCOLN memorial is one of the most interesting in the project [Monumental IDEAS].

During the pandemic, museums went fully online as the new normal [Diamantopoulou 2020]. Galleries and museums used technology to save themselves during the lockdowns though many couldn't afford to, many tried and failed [Ings 2021] and to future-proof themselves in the dynamic digital world.

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Museums' digital services, digitalization of their collections during the pandemic were analyzed [Digital technologies and museums; ExperienceVirtual tour..; Friedman 2021; Natural History Museum, Survey on the impact 2020] and presented as detailed reports and ... maps. One of the maps with unique legend, unimaginable some years ago, spans museums' digital services during COVID-19 pandemic – Contemporary Collecting Projects, Streaming Content, Social Media initiatives, Virtual Tours, Online Exhibitions, Games, Educational Content, Tweets [Museum digital initiatives]. The Museum Computer Network (MCN) lists hundreds of virtual tours, online exhibitions, e-learning and online collections from around the world that use open access material [Krishna 2021]. Museums reported that next to social media, online services such as educational material are most popular with online visitors, followed by videos and films viewing the collection. The new normal placed emphasis on visitor participation, the creation of a museum digital community and the creation of digital content as an alternative to physical collections [The Museum as a multimodal digital entity]. Digital citizenship, global audience, cognitive modelling of the content are among major challenges the museums faced. Undoubtedly, it was a new experience for museums staff and new impressions for digital visitors. All of them used the content they had digitized previously but they had to diversify their approach to exhibitions which obviously became much more multimodal. 'The multimodal aspects of communication, including representation, communication and performative action, have been massively intensified. These modes realise meanings which are further shaped through the affordances of the online media and technologies (apps, platforms, portals, other). Digital experience, digital services and activities of museums, engagement of digital audience look the best practice and huge investments are expected in museums digital infrastructures in the future.

Museums have presented online exhibitions in different ways, but it remains to be seen which of these are most effective in engaging visitors in the informal learning experience that museums often seek [King 2021]. The new trend is the focus is very much on the story first and the artworks second, and it gives more of an appreciation for her story than a standard 360 tour could accomplish [Richardson 2021].

The Louvre, the world's most-visited museum, had placed its entire collection online. The Louvre's new [platform](#) allowed people to use 480,000 pieces, including items stored in vaults not accessible to in-person museum-goers

[The museum's entire...]. The British Museum not only [offers](#) podcasts and virtual strolls, it lets you twirl and zoom in on 3D replicas of the [Rosetta Stone](#), the Babylonian [map of the world](#), sculptures of Egyptian [pharaohs](#), a mummy's mask and a frieze from the [Parthenon](#) [Panetta 2021]. The National Gallery in London offered a tour for their Artemisia blockbuster with the focus on the story first and the artworks second. The Gallery implemented new business models and monetisation strategy and charged £8 for 48-hour-access for the film. In the nearest future new museums' business models might result into a consolidated subscription service – a sort of arts Netflix or Spotify [Ings 2021]. Largely, the online exhibitions consist of clicking, scrolling, and watching videos. However, museums are trying to create a sense of presence and place and are trying to transport online visitors from their homes back into museums. Phenomenological embodiment thus plays an important role [King 2021].

Another challenge in content delivery museums is heterogeneity of the digital audience as people differ in terms of perceiving and processing information, knowledge acquisition. So user modelling of digitized cultural-heritage interaction contexts, tailoring content to the users' cognitive characteristics has become of paramount importance [A COGNITION-CENTERED]. Museum of Digital Art (MuDA), Zürich, Switzerland, together with its partners, offered live streamed Creative Corona Classes. The classes were grouped according to target group (age, language, keywords) and people could easily join by clicking on the class. Many museums launched new education projects, much more interactive than virtual tours. For instance, they started producing live content, aimed at schoolchildren, to increase interactivity and give children a chance to ask numerous questions about the exhibits. The Natural History Museum of LA county offered interactive presentations over video conferencing software Zoom. Schools can arrange for class 'visits' with museum educators where they can explore collections and ask questions. Museums used video to showcase the collections with curators guiding the viewer around their halls. Museums charged for live streamed Zoom sessions with educators, as institutions look for sustainable business models [Richardson, 2021]. Museums used the tool, Museum Educator, which allowed interaction with digital visitors.

Some museums offered virtual games, thus implemented gamification and edutainment strategies to encourage schoolchildren to plunge into museum online landscape. For example, the V&A in London, working with HTC Vive Arts had chosen Lewis Carroll's *Alice* books for its 2020 summer show and created a VR

game based in Wonderland, where people can follow their own White Rabbit, solve the caterpillar's mind-bending riddles, visit the Queen of Hearts' croquet garden and more. *Curious Alice* is available through Viveport, the real-world show since 27 March 2021 [alice 2021, Ings 2021; V&A & HTC]. Monterey Bay Aquarium used the popular streaming platform Twitch to share the educational and entertaining adventures of their team in the game. The games offered a unique platform for collaboration and creativity at a time 'when face-to-face interaction has been limited.' In the United States, the Carnegie Museum of Natural History built its TikTok following. The TikTok has become the digital channel which seems to have attracted the most attention this year [Krishna 2021].

Thanks to digital technologies some local museums received international recognition and witnessed the increase of digital audience. For example, *Riga Motor Museum* used the chance to implement digital technologies to explore the collections virtually, namely, augmented reality experience, video mapping show, visual projections, hands-on-exhibits, games [Riga Motor Museum].

One more visible trend is collecting online, through online crowdsourcing. Online collecting tends to be multimodal too. Collecting Covid is one of the initiative of the Museum of London to better tell the story of the city during COVID-19 pandemic and to compare it with previous epidemic. *'Our aim is to reflect the voices and experiences – good and bad – of a broad range of Londoners, as well as changes to the urban environment caused by the capital going into, and emerging from lockdown. We are interested in the tangible and intangible, the extraordinary as well as the everyday.'* One of the most interesting additions to the collection captures the sounds of central London during the capitals lockdown and contrast this with recordings from 1928 [Museum for London 2020]. This museums' experience can be compared with collecting data from social media in 2013 when Margaret Thatcher, British Prime Minister (1979-1990), died [Hadley 2014; Media reactions 2013]. That death sparked strong opinions and reactions, revealed polarizing views in social media. For the first time, the data of social media was accumulated as ad hoc corpora to study deep contradictory emotions expressions [Valdeon 2019].

Another example of museum collecting is connected with BLM. History proves that pandemic is usually accompanied by large-scale social movements and conflicts. COVID-19 gave lots of facts to draw parallel with stigmatization, propaganda, political and social conflicts during 1918 pandemic, mostly known as 'Spanish flu' [Gotter 2020]. Chronologically, 'Spanish flu' was interconnected

with WWI, collapse of monarchies and overhaul of the political systems in European countries. COVID-19 pandemic coincided with *Black Lives Matter* movement. Race has always been a sensitive social issue. The importance of the issue increased worldwide in the wake of BLM. Smithsonian Museum of African American History and Culture launched the portal *'Talking About Race'*, 'designed to help individuals, families, and communities talk about racism, racial identity and how forces shape every aspect of our society'. The museum's *Facebook group* became a depository of contemporary sensitive data, namely pejorative, racist and abusive posts documenting expressions of protest in relation to the recent uprisings against police violence. As the museum put it 'the conversation trails with responses by visitors bring private domains into a different kind of visibility which would not have been possible in the physical museum' [Clare 2020; Smithsonian]. This is the example of making museums more engaged in a democratic and inclusive future, of reframing multimodal communication and ethics in times of social change, in the new social and digital landscape.

Another result of digital services and museum collecting online is *Big* and personal *Data* these institutions accumulated while communicating with digital visitors and global audience. This data provokes questions of security and ethics, and entails the necessity of recruiting more IT specialists to museums to cope with the Big Data.

Conclusion and further research

Thanks to digital technologies and digital multimodality the boundaries between physical and digital museums blurred during COVID-19 pandemic. Digital technologies during the pandemic gave the alternative for communication and information search, alternatives to visiting physical museums, making museums visible and accessible in the digital domain. Museums' digital multimodality contributed to democratization of global cultural heritage, made digital immersion into world culture and virtual reality possible. Digital technologies meet the requirements of personification as a futuristic ICT trend. They offer individual personalized examination of arts objects. Physical museums do not always provide so 'comfortable environment to witness the *Mona Lisa*, imprisoned behind bulletproof glass under low-level diffuse lighting and protected by barricades. Art isn't "available" in any real sense when you can only spend 10 seconds with a piece' [Ings 2021].

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Secondly, digital technologies reframed the approach to arts and access to culture heritage and posed questions about sightseeing. Not always museums did put on display the originals. Victorians had copies, plaster casts of the ancient masterpieces at V&A Museum. In British Museum there are rooms full of the original and fake vases from Ancient Greece. 3D models and digital images of art objects are the 21st century analogy of plaster casts and replicas. As British art critic Jonathan Jones says: “This is not a new age of fakery. It’s a new era of knowledge” [Ings 2021].

No film, virtual tour, 3D images will substitute the museum with the originals but digital technologies give numerous alternatives to visit museums globally and obtain profound knowledge in art, culture and applied science.

References:

1. *A Cognition-Centered Approach for Delivering Personalized Cultural-Heritage Experiences*, <https://www.vi-mm.eu/project/a-cognition-centered-approach-for-delivering-personalized-cultural-heritage-experiences/>
2. *Alice: Curiouser and Curiouser Exhibition Preview at V&A Museum, London*, <https://www.youtube.com/watch?v=NIu-j6cohcI>
3. *Ancient Art – Digital Maps of the Ancient World* (2021), <https://www.vi-mm.eu/2021/04/12/ancient-art-digital-maps-of-the-ancient-world/>
4. *Ancient Greece Created Five of Seven Wonders of the Ancient World* (2020), <https://www.vi-mm.eu/2021/06/20/ancient-greece-created-five-of-seven-wonders-of-the-ancient-world/>
5. *Bristol Museums | Exhibitions Online*, <https://exhibitions.bristolmuseums.org.uk/>
6. *Can Smell be a Work of Art?* (2015), <http://www.smithsonianmag.com/smithsonian-institution/can-you-smell-work-art-180958189/>
7. Caro Verbeek. *What Can The Scents Of The Past Tell Us About Our History?* (2021), <https://www.npr.org/2021/01/15/956933669/caro-verbeek-what-can-the-scents-of-the-past-tell-us-about-our-history>
8. Cascone, Sarah. *Egypt Just Held an Astonishing, Real-Life Mummy Parade Though the Streets of Cairo to Celebrate the Opening of a New Museum* (2021), <https://news.artnet.com/art-world/cairo-mummy-parade-1956993>
9. Clare, Rod. *The Black Lives Matter Movement in the National Museum of African American History and Culture* (2020), <https://museum-companion.berghahnjournals.com/2016/12/the-black-lives-matter-movement-in-the-national-museum-of-african-american-history-and-culture/>
10. Diamantopoulou, Sophia, Paschou, Sophia and Papaioannou, Georgios. *Experiencing the digital museum at the time of the pandemic: The ethics of multimodal communication with the visitors* (2020), <https://panmemic.hypotheses.org/778>

11. *Digital Collection • Städel Museum Frankfurt • staedelmuseum.de*, https://sammlung.staedelmuseum.de/en?gclid=CjwKCAjwuIWHBhBDEiwACXQYsRr8CJW7GEP2c4bTnR-IQLbt2R517ciD46AofP4n3dXifsRt0xVq3BoCDGsQAVd_BwE
12. *Digital exhibition of Van Gogh heritage*, <https://www.facebook.com/groups/nauka4.0/permalink/932125834014831/>
13. Digital technologies and museums: post-pandemic experiences (2020) Retrieved from: https://www.interregeurope.eu/policylearning/news/9060/digital-technologies-and-museums-post-pandemic-experiences/?no_cache=1
14. *Experience Virtual tour of the Tower of London in Virtual Reality*, <https://www.youvisit.com/tour/meadk>
15. *Facing Challenge with Resilience: How Museums are Responding During COVID-19* (2020), <https://www.imls.gov/blog/2020/04/facing-challenge-resilience-how-museums-are-responding-during-covid-19>
16. Friedman, Ann B. *Planet Word: Opening a Museum Mid-Pandemic* (2021), <https://panmemic.hypotheses.org/985>
17. 'Gestures – in the past, present, and future': A museum exhibition based on multimodal research (2019), <https://www.ucl.ac.uk/ioe/events/2019/jun/gestures-past-present-and-future-museum-exhibition-based-multimodal-research>
18. Gotter, Cedric. *From the 'Spanish Flu' to COVID-19: lessons from the 1918 pandemic and First World War* (2020), <https://blogs.icrc.org/law-and-policy/2020/04/23/spanish-flu-covid-19-1918-pandemic-first-world-war/>
19. Grant, Daniel. *Pandemic Pushes Museums Deeper Into Digital Age* (2020), <https://www.wsj.com/articles/pandemic-pushes-museums-further-into-digital-age-11596196801>
20. Hadley, Louisa. *Social Media Responses to Thatcher's Death* (2014), https://link.springer.com/chapter/10.1057/9781137428257_4
21. *Handbook of Research on Transmedia Storytelling, Audience Engagement, and Business Strategies* (2020), <https://www.igi-global.com/book/handbook-research-transmedia-storytelling-audience/240166>
22. Henshaw, Victoria. *Urban Smellscapes. Understanding and Designing City Smell Environments* (2014), <https://www.routledge.com/Urban-Smellscapes-Understanding-and-Designing-City-Smell-Environments/Henshaw/p/book/9780415662062>
23. *How to Explore a City Through Its Scents*, <https://www.foldmagazine.com/sensory-maps>
24. Hussein, Wael. *Egypt Mummies Pass Through Cairo IN Ancient Rulers' Parade* (Apr 2021), <https://www.bbc.com/news/world-middle-east-56508475>.
25. *IMPERIAL IMPRESSIONS from the Sisi Museum*, <https://www.schoenbrunn.at/en/about-schoenbrunn/schoenbrunn-digital/imperial-impressions-sisi-museum#video-1-3>
26. Ings, Simon. *How the pandemic is revolutionising art galleries and museums* (2021), <https://www.newscientist.com/article/mg24933202-100-how-the-pandemic-is-revolutionising-art-galleries-and-museums/>

27. Kahn, Rebecca. *Locked down not locked out – Assessing the digital response of museums to COVID-19* (2020), <https://blogs.lse.ac.uk/impactofsocialsciences/2020/05/08/locked-down-not-locked-out-assessing-the-digital-response-of-museums-to-covid-19/>
28. King, Ellie, M. Paul Smith, Paul F. Wilson, Mark A. Williams/ *Digital Responses of UK Museum Exhibitions to the COVID-19 Crisis, March – June 2020* (2021), <https://onlinelibrary.wiley.com/doi/full/10.1111/cura.12413>
29. Kress, Gunther. *Multimodality: A Social Semiotic Approach to Contemporary Communication* (Routledge, London, 2010), 212.
30. Kress, Gunther and Theo van Leeuwen. *Multimodal Discourse: The Modes and Media of Contemporary Communication* (Oxford UK: Oxford University Press, 2001).
31. Krishna, Achyut. *Digital Transformation of Museums in the Time of Covid Pandemic* (2021), <https://timesofindia.indiatimes.com/readersblog/solipsisticmusings/digital-transformation-of-museums-in-the-time-of-covid-pandemic-33099/>
32. Lenanton, Katie. *Smell You Later* (2014), <http://2014.nextwave.org.au/events/smell-you-later/>
33. *Media reactions to the death of Margaret Thatcher – ‘misapplied death etiquette’?*, <https://wan-ifra.org/2013/04/media-reactions-to-the-death-of-margaret-thatcher-misapplied-death-etiquette/>
34. Medina, Sammy. *Watch 6 Wondrous Clouds Float Inside Museum Walls* (2013), <https://www.fastcompany.com/1672814/watch-6-wondrous-clouds-float-inside-museum-walls>
35. MIM – *Musical Instruments Museum*, <https://www.brusselsmuseums.be/en/museums/mim-musical-instruments-museum>
36. *Monumental IDEAS*, <https://cyark.org/monumentalideas/game>
37. *Multimedia Storytelling & Content Marketing*, <https://learn.utoronto.ca/programs-courses/certificates/multimedia-storytelling-content-marketing>
38. *Museum digital initiatives during the Coronavirus Pandemic*, <https://digitalmuseums.at/>
39. *Museum for London: Collecting COVID* (2020), <https://www.museumoflondon.org.uk/discover/museum-for-london-collecting-covid>
40. *Musical instruments – Deutsches Museum Retrieved*, <https://www.deutsches-museum.de/en/exhibitions/natural-sciences/musical-instruments/>
41. *Natural History Museum Launches 3D Virtual Tour Technology*, <https://www.nhm.ac.uk/press-office/press-releases/natural-history-museum-launches-3d-virtual-tour-technology/natural-history-museum-launches-3d-virtual-tour-technology.html>
42. Obrist, Marianna Gatti, Elia Maggioni, Emanuela and Chi Thanh Vi, Velasco, Carlos. *Multisensory Experiences in HCI* (2017), [sensorium-art-soundscapes-chocolates-invisible-rain](https://www.researchgate.net/publication/317111111)
43. Panetta, Alexander. *A world of art at our fingertips: How COVID-19 accelerated the digitization of culture* (2021), <https://www.cbc.ca/news/entertainment/digitization-culture-pandemic-1.6015861>
44. Quenqua, Douglas. *Art for the Knowing Nose*, <https://www.nytimes.com/2015/04/07/science/art-for-the-knowing-nose.html>

45. Richardson, Jim. *Digital Ideas for Museums in a Post-Pandemic World* (2021), <https://www.museumnext.com/article/digital-ideas-for-museums-in-a-post-pandemic-world/>
46. Riga Motor Museum, <http://www.motormuseum.com/kremlin-collection.php>
47. Smell Me. *Artist Transforms Body Odor Into Olfactory Self-Portrait* (2012), <https://www.wired.com/2012/10/smell-me-martynka-wawrzyniak/>
48. Smithsonian National Museum of African American History and Culture, <https://www.facebook.com/NMAAHC/>
49. Speed, Barbara. *A designer is creating "smell maps" of cities* (2014), <https://citymonitor.ai/community/designer-creating-smell-maps-cities-377>
50. *Survey on the impact of the COVID-19 situation on museums in Europe Final Report*, https://www.ne-mo.org/fileadmin/Dateien/public/NEMO_documents/NEMO_COVID19_Report_12.05.2020.pdf
51. *The Art of Scent: The Museum of Arts and Design* (2012), <http://madmuseum.org/exhibition/art-scent>
52. *The museum as a multimodal digital entity during the pandemic*, <https://www.youtube.com/watch?v=JTdTp-5p-Ng>
53. *The museum's entire collection on one platform*, <https://www.louvre.fr/en/explore#collections>
54. *There's Something in the Air – Scent is Art* (2015), http://www.peterdecupere.net/index.php?option=com_content&view=article&catid=1:exhibition-news&id=159:theres-something-in-the-air-scent-in-art
55. *The Routledge Handbook of Multimodal Analysis*, 1st Ed. by Carey Jewitt (Routledge, 2009).
56. *This Animation of how Bridges Were Constructed in 14th Century Prague is Amazing* (2020), <https://www.vi-mm.eu/2020/12/21/this-animation-of-how-bridges-were-constructed-in-14th-century-prague-is-amazing/>
57. *Touch, smell and eat your art at Tate Britain's 'Sensorium'* (2015), <https://www.wired.co.uk/article/tate-sensorium-review-2015>
58. Valdeon, Roberto A. *Ad Hoc Corpora and Journalistic Translation Research: BBCNews and BBCMundo's Coverage of Margaret Thatcher's Death and Funeral* (2019), https://www.researchgate.net/publication/330534516_Ad_Hoc_Corpora_and_Journalistic_Translation_Research_BBCNews_and_BBCMundo's_Coverage_of_Margaret_Thatcher's_Death_and_Fuenral
59. *Virtual games and activities for kids in Parisian museums. Parisian museums pamper kids with puzzles, video games, virtual tours, experiences and web series*, <https://en.parisinfo.com/practical-paris/info/guides/virtual-games-kids-parisian-museums>
60. *Virtual Museum: 14 ways to explore from home*, <https://www.nhm.ac.uk/visit/virtual-museum.html>
61. V&A & HTC VIVE ARTS. *Curious Alice Extending the visitor experience for gallery and remote audiences with a VR Wonderland*, <https://preloaded.com/work/curious-alice/>
62. *VR Museum of Art*, https://mirukai.org/en/museum?gclid=CjwKCAjwz_WGBhA1EiwAU_AxIcTQS_8RRnbREa-S4ZvWe2c6pAkcSk0Txon6vD5xYqoISm0PbNUZtuBoC-EUQAvD_BwE

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