

03



Muddy Waters

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Front cover: Jazz Luminaries: application screen capture
This page: Jazz Luminaries © Alain Herzog



INTRODUCTION

For the third issue of our e-magazine, Photo London is delighted to present *Jazz Luminaries*, an interactive full dome installation featuring 5,400 artists of Jazz, Blues, and Latin music connected through more than 30,800 links.

Jazz Luminaries was created by EPFL's Laboratory for Experimental Museology (eM+) for ArtLab, in partnership with the Cultural Heritage & Innovation Center, the Claude Nobs Foundation, and the Montreux Jazz Festival. The interactive installation directed by Prof Sarah Kenderdine is based on the UNESCO Memory of the World Montreux Jazz Archive collection, and features over 13,000 videos of iconic musicians including B.B King, Miles Davis, Herbie Hancock, and Chick Corea.

Sarah Kenderdine was originally invited to take part in a panel discussion 'Deep Fact or Deep Fiction: Rethinking Preservation in the shadow of an uncertain future' with specialist, Adam Lowe and Cloud Architect, Phil Harvey, for the Talks programme during Photo London 2020.

Instead, this issue features a selection of images from *Jazz Luminaries*, a short Q&A between Sarah Kenderdine and William Ewing, as well as a video of the installation.



Image credit: Fieldwork, Sanchi, India 2019 © Leo Meier



Q&A with Sarah Kenderdine and William Ewing



Left: Sarah Kenderdine
Right: William Ewing

William: Sarah, here we are in the context of a photography fair, where the main focus is on sellers and buyers, or the photograph as a work of art. You come at the medium very differently, do you not?

Sarah: My relationship with photography began in a scientific manner. I was trained as a maritime archaeologist although my teachers were definitely artists of the photographic form (underwater). I learnt to shoot stereo pairs underwater with a mobile rig and UW housing, and images used for photogrammetric reconstruction and so on. That was the late 80s, we worked on film, which we also processed by hand. I moved from maritime archaeology to building the first cultural website in the southern hemisphere and the grand old days of experimentation on the web.

William: First cultural website: that's intriguing. Could you explain?

Sarah: I began to work on heritage sites but never classical photography, always spherical panoramas stitched from hundreds of digital photos from the late 1990s (today we would call them gigapixels; we moved through iterations of iPix and QTVR etc for display on the web). By 2000 I was building large scale immersive installations, in gallery, for museums and with a colleague Peter Murphy in 2003, created a series of stereographic spherical panoramas from a single source camera and fisheye lens-of Angkor (the process emulates a slit camera and alternate slices go to make up left and right eye images).

William: Stereo seems the key word here....

Sarah: I was very hungry for resolution and anything stereographic. I moved on to the wonderful Swiss camera by Seitz, the 'analogue' stereoscopic panoramic version of the VR Roundshot — shooting left and right eye panoramic images on 220 Fujichrome Astia, then Provia — India (2006), Turkey (2009) and now we just finished a massive shoot on this camera for the Atlas of Maritime Buddhism (2017-2020).

William: That's intriguing, can you flesh that out for us?

Sarah: 1000s of sites across 12 countries from India through SE Asia and China. We've chased down all the last rolls of 220 that exist. Why such an arcane sport? Resolution! – these transparencies can be scanned up to and more than the 30,000 pixels horizontally (left eye; right eye) which is what is required for the systems we build and what's more they can be taken in a few seconds. Our digital equivalent (emulating a stereo slit camera – shooting movie frames) is achingly slow by comparison (in 1 min, the world has changed). Stereographics relies on sharpness. Did I mention how beautiful film is! So, while exhausting the world stocks of film, and carting a fridge around on shoots across numerous Asian countries in monsoon, I've been privileged to work with professional photographers: Benjamin Healley, John Gollings and most recently Leo Meier. On the digital side, I work a lot with the computational photographer Paul Bourke, we shoot gigapixels and photogrammetric models right across the world depending on the project (e.g. 100s of 3D sculptures from all the Asian museums with seminal Buddhist iconography) but always with the view for hemispherical or panoramic display. As machine learning comes into force, its application to our datasets is transformative...another story.

William: The photographers you mention: I'd be curious to know how you got to know them? Natural gravitational process? Seek them out?

Sarah: We tend to gravitate into a small club of people interested in these techniques and technologies – ultra-high resolutions, hemispherical and panoramic display systems, and the challenges of fieldwork friendly rigs for modest budgets!

William: That's a peek at a new world for me, Sarah. What's the essence of what you're after?

Sarah: In all the work we do, in all these capture processes, what interests me is the creation of the conditions for kinaesthetic experience of (new) art, architecture and heritage through the 'technologies of embodiment' (display hardware/software/interactive and narrative paradigm/image). We build all our own systems for display, which are interactive and the scale at which we work is often 'real world' (=BIG/3D/Interactive). We are engaged in the reperformance of place and the proliferation of aura in objects. The 'we' is often media artist Jeffrey Shaw, me and numerous collaborators.

I'm currently curating a new show for the galleries I direct (March 2021) which is attached (not a definitive list of content, so not worth quoting). The emphasis in this show is on new modes of experience based on the digital replicated. In the time of COVID-19, the after image takes on new poignancy.

Jazz Luminaries



Image credit: Jazz Luminaries © Catherine Leutenegger



Reclined under the full dome in a hemispheric gestalt, participants in *Jazz Luminaries* create an experience of their own that unfolds the social network of more than 5,400 musicians whose recordings are held in the Montreux Jazz Archive.¹ The installation transforms this UNESCO Memory of the World collection, digitized at the *École polytechnique fédérale de Lausanne* (EPFL), into an interactive experience of aesthetic transcription. Through a unique multimodal interface *Jazz Luminaries* allows viewers to cut, remix and replay over 13,000 videos of those 5,400 jazz greats.²

Using a spherical interface that emulates the curvature of the dome itself, any member of the public navigates this vast archive for the others also gazing upwards. A dome's ability to completely envelope the visual field of viewers in a mediated environment has continued to provide a revolutionary framework for pioneers in the arts and sciences. The concept of an 'experiential' domed environment was first conceived by the art and engineering collective, 'Experiments in Art and Technology' for the Pepsi Pavilion at Expo '70 in Osaka, Japan. At the time, art critic Barbara Rose described their work as the 'theatre of the future' and a 'living responsive environment'. Rose added that the dome was envisioned as a 'total instrument' to be played by the participants, providing them with 'choice, responsibility, freedom, and participation'.³ Such early developments in dome projection theatres emerged from attempts to simulate the 'spherical gestalt of the human visual field' and were designed to exploit and extend sensory perception.⁴ Many of the pioneers involved in conceiving dome experiences from the 1960s onwards believed that spatialised multisensory embodiment made possible in a dome would enhance the capacity and speed of human cognition, and ultimately a sense of presence or 'being there'.

¹ Montreux Jazz Digital Project, <https://www.epfl.ch/innovation/domains/cultural-heritage-and-innovation-center/> Retrieved March 30, 2020.

² Jazz Luminaries works with a subset of the overall archive, including only jazz, blues and latin genres. Each database node for an artist contains numerical attributes, for example the number of connections with other artists, numbers that were interpreted to assign colour and to add depth for the visualization in 3d space.

³ Barbara Rose quoted in David McConville (2007) 'Cosmological cinema: Pedagogy, Propaganda, and Perturbation in Early Dome Theaters', *Technoetic Arts*. 5: 82.

⁴ McConville, 'Cosmological cinema': 77.

In *Jazz Luminaries*, each musician is represented by a node, which is interconnected via their historic collaboration with other Montreux Jazz Festival artists over the years. Navigating this vast archive, enlivens the constellation of relationships between the artists. In a paradigm similar to tuning a radio, as users surf over the nodes, their movement activates the sounds linked to the artists and their songs. The proximity of the nodes in the network (and thus their link strength) are based on the number of times any one musician played with another artist at the Festival. At the center of this universe is the legendary B.B. King, the 'King of the Blues', who performed at Montreux for over 20 years.⁵

As participants seek out 'that song' by surfing the nodal constellations, they produce a rapidly changing sonic cloud and an anarchic assemblage of clips. They can select and cut between discovered video fragments, finding the one of most intensity or reciprocity. Selecting the clip again rewards them, with a single performance in its entirety, reconstituted from the original equirectangular video into a postcinematic arrangement of motion and music. Shedding its original framed recorded form, the footage explodes into a fractal of perspectives.

In a serendipitous journey, each participant performs this 'remix' for all the other people who recline around them under the dome. As they surf, they are intimately aware that they are curating the experience, sharing their discoveries in the jukebox with their counterparts. Socializing the interface in this way, those gathered lie back and enjoy a vibrant and boundless unfolding of the Montreux archive at the hands and ears of others.

⁵ During his 2006 show at Montreux Jazz Festival in the Stravinski Hall, B. B. King jammed with Joe Sample, Randy Crawford, David Sanborn, Gladys Knight, Leela James, Andre Beeka, Earl Thomas, Stanley Clarke, John McLaughlin, Barbara Hendricks and George Duke. "[B.B. King Farewells Montreux](#)". *The Sydney Morning Herald*. July 5, 2006. Retrieved May 15, 2015.

Jazz Luminaries is not only a novel way to delve into an archive, it also challenges the dominant history of archive making. Archival records present us with a partial account – a small fragment of history defined as much by their lacunae as their content. Archives have a history of their own, starting with ‘Archive 1.0’, which as Michael Foucault set out in *The Archaeology of Knowledge*, is a product of bureaucracy designed to be used as an instrument of management and power.⁶ Following this, Archive 2.0 might be dubbed ‘archive fever’, following Jacques Derrida.⁷ The intensification of archives emerged from the widespread mechanization and digitization of archival materials, which created instant access to databases based upon efficient dendritic classification, retrieval and statistical analysis.

Jazz Luminaries meanwhile emulates the most recent evolution with ‘Archive 3.0’. Also called the ‘future archive’, this latest iteration is centered on properties of recollection, regeneration, and reworking, as well as rich modes of engagement, new architectures, and serendipities, visualizations, interfaces and interaction. Centered on collaborative co-creation, Archive 3.0 is dynamic, corresponding to the shift from a classification of objects to their remix, in a paradigmatic move from the orthodox model of stewardship via curation and managed access, to one of co-production, as evident in the development of crowdsourcing and Application Programming Interfaces (APIs).

Theorists know that archival records only present us with a partial account, just a small fragment of total history defined as much by lacunae as by content. However, the numerous ways that an archive can be reassembled, mined and experienced, proliferates its meanings. These archives demand us to create novel forms of human computer interaction, new prosthetic architectures for the production and sharing of archival resources. The resulting applications promise to distribute authority, liberating allowing people to sculpt emergent histories in panaesthetic adventures.

Paradigm-changing technologies such as machine learning, computer vision and novel visualizations will continue to engage artists and scientists for the years to come as digital archives continue to burgeon. *Jazz Luminaries* contributes to this experimentation.

⁶ Michael Foucault, *The Archaeology of Knowledge* (1972). Trans. A. M. Sheridan Smith. New York: Pantheon Books.

⁷ Jacques Derrida. (1996). *Archive Fever: A Freudian Impression*, Trans. Eric Prenowitz. Chicago: University of Chicago Press.



Image credit: Jazz Luminaries © Catherine Leutenegger



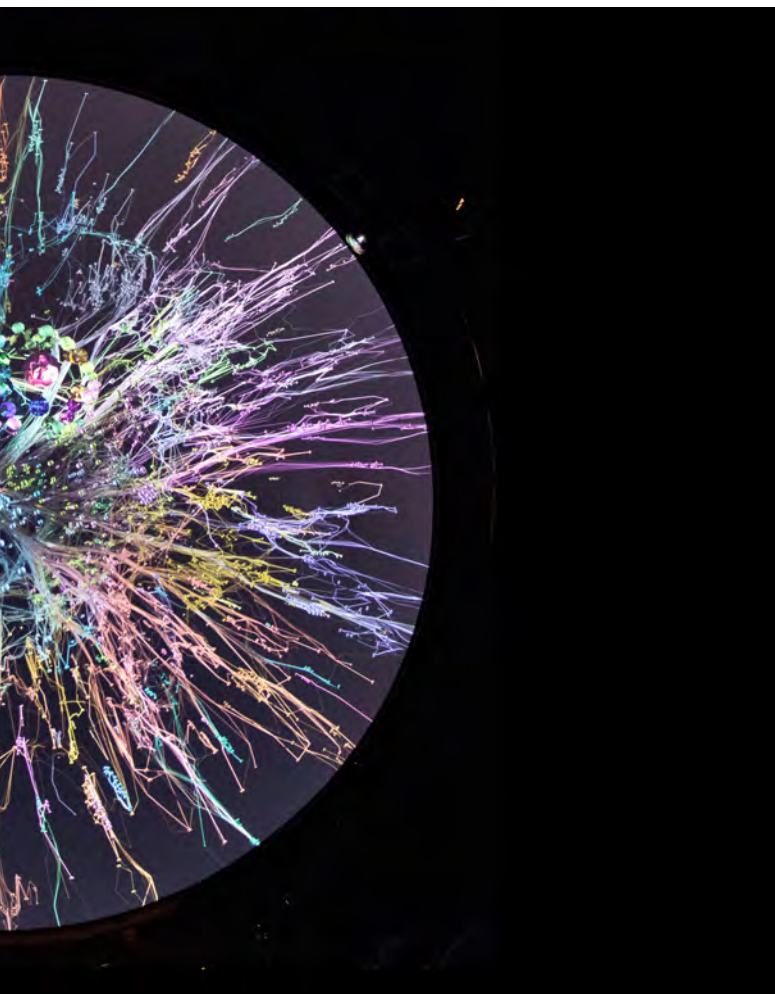


Image credit: Jazz Luminaries © Sarah Kenderdine

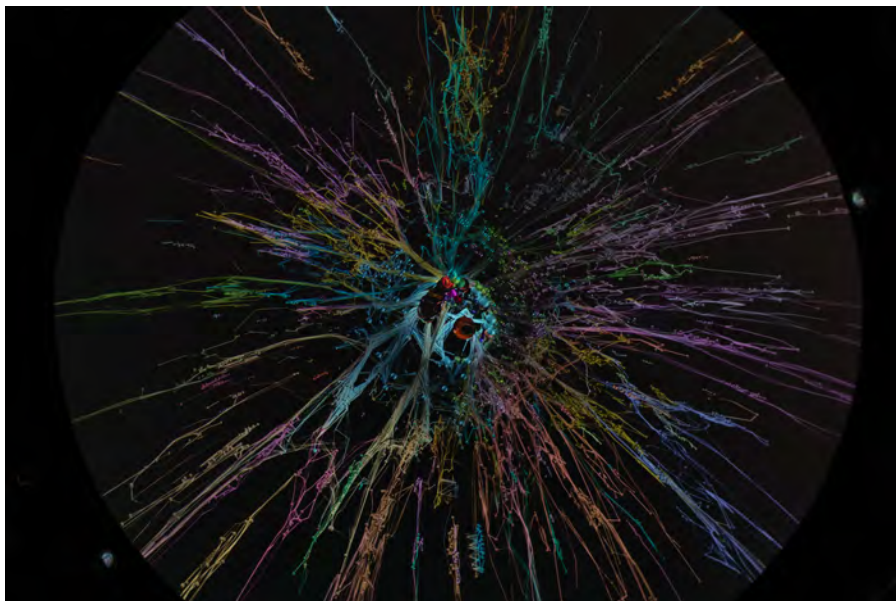


Image credit: Jazz Luminaries © Catherine Leutenegger



Image credit: Jazz Luminaries © Catherine Leutenegger



Image credit: Jazz Luminaries © Sarah Kenderdine

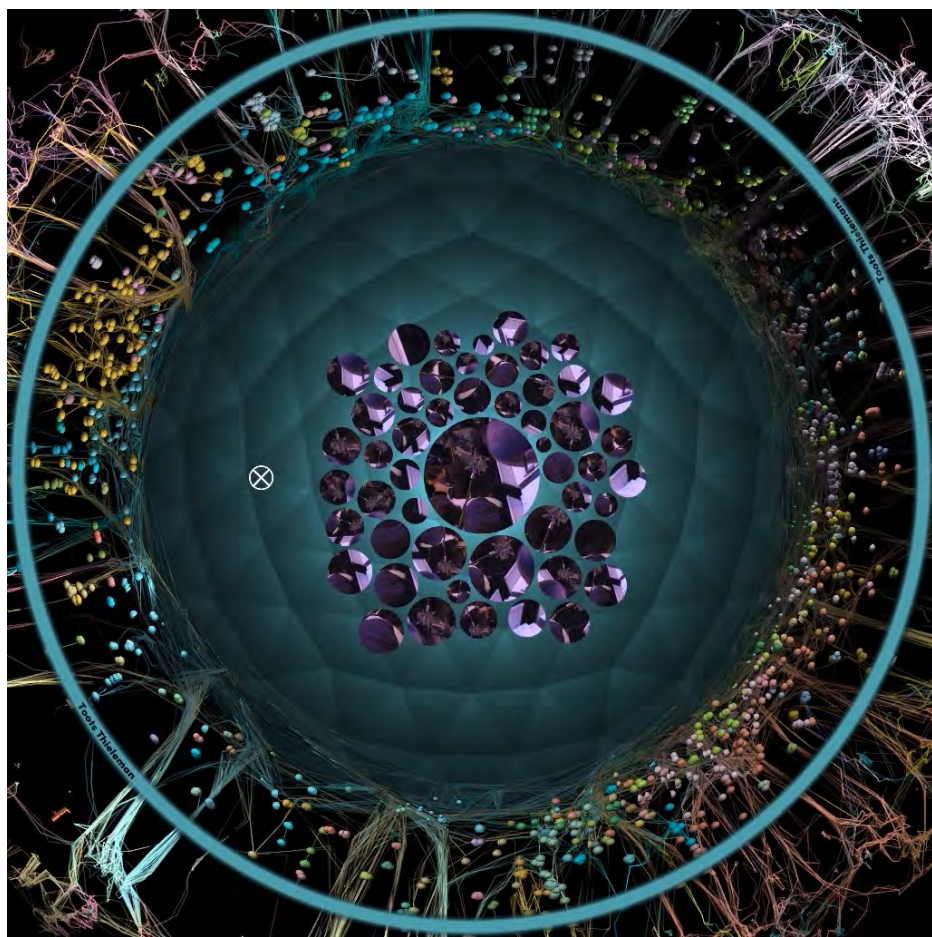


Image credit: Jazz Luminaries © Sarah Kenderdine



Image credit: Jazz Luminaries © Sarah Kenderdine



Image credit: Jazz Luminaries © Sarah Kenderdine



Image credit: Muse evaluation tool at Jazz Luminaries © Sarah Kenderdine



Video sequence recorded from a real-time interaction by participants engaged in Jazz Luminaries

Biographies

Professor Sarah Kenderdine researches at the forefront of interactive and immersive experiences for galleries, libraries, archives and museums. In widely exhibited installation works, she has amalgamated cultural heritage with new media art practice, especially in the realms of interactive cinema, augmented reality and embodied narrative. She is considered a pioneer in the field digital heritage, digital museology, digital humanities and data visualisation and is a regular keynote speaker at related forums internationally. In addition to her exhibition work she conceives and designs large-scale immersive visualisation systems for public audiences, industry and researchers. Since 1991 Sarah had authored numerous scholarly articles and six books. She has produced 80 exhibitions and installations for museums worldwide including a museum complex in India and received a number of major international awards for this work. In 2017, Sarah was appointed Professor of Digital Museology at the École polytechnique fédérale de Lausanne (EPFL), Switzerland where she has built a new laboratory for experimental museology (eM+), exploring the convergence of aesthetic practice, visual analytics and cultural data. She is also Director and lead curator of EPFL's new art/science initiative, inaugurated in 2016 as ArtLab.

William A. Ewing is a noted author, curator, professor, and museum director with almost forty years of work in the field of photography, split almost equally between America and Europe. His career began in Canada, where he established Optica Center for Contemporary Art in Montreal in 1972 before moving to New York in 1977, where he served as Director of Exhibitions for seven years.

His exhibitions have been shown in many museums around the world, including the Museum of Modern Art, the International Center of Photography, and the Museum of the Fashion Institute of Technology, New York; the Serpentine Gallery, the Barbican Art Gallery, the Whitechapel Gallery and the Hayward Gallery, London; the Jeu de Paume, the Centre Pompidou, and the Musée Carnavalet, Paris; the Kunsthau, Zurich; the Museo Nacional Reina Sofia, Madrid; the Museo Correr, Venice; the Art Gallery of Ontario, Toronto; the Musée des Beaux Arts, Montreal; the Vancouver Art Gallery; the Fort Lauderdale Museum of Art; the Walker Art Center, Minneapolis; the Nelson Atkins Museum, Kansas City; and the Musée de l'Elysée, Lausanne, Switzerland, which he directed from 1996 to 2010. In 2009 he was co-curator of the New York Photo Festival, and in 2010 he curated three shows for the French festival, Les Rencontres d'Arles.

Mr Ewing is the author of many books, including the bestselling *The Body; Face: The New Photographic Portrait; Dance and Photography; reGeneration: Tomorrow's Photographers Today* (editions in 2005 and 2010); and many monographs on such artists as Ray K. Metzker, Leonard Freed, Erwin Blumenfeld, George Hoyningen-Huene, Dan Weiner and Edward Steichen. Mr Ewing is currently Director of Curatorial Projects for the publishing house Thames & Hudson (London/New York/Paris/Hong Kong/Singapore/Melbourne), and Curator for Special Projects at the Foundation for the Exhibition of Photography (Minneapolis/Paris/Lausanne). Mr Ewing has taught the history of photography at the University of Geneva for over a decade. On retiring from the Musée de l'Elysée in 2010, he was appointed Officer of the Ordre des Arts et des Lettres of the Republic of France.

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Spherical controller, concept: Sarah Kenderdine; engineer Patrick Chouard, ArtLab



Image credit: Jazz Luminaries © Sarah Kenderdine