Digital Art and Identity Merging Human and Artificial Intelligence: Enter the Metaverse

Tula Giannini
Pratt Institute
School of Information
New York, USA
http://sites.google.com/view/tgiannini
giannini@pratt.edu

Jonathan P. Bowen
London South Bank University
School of Engineering
London, UK
http://www.jpbowen.com
jonathan.bowen@lsbu.ac.uk

Chris Michaels
National Gallery &
King’s College London
London, UK
https://www.kcl.ac.uk/people/chris-michaels
Chris.Michaels@ng-london.org.uk

Carl Hayden Smith
Ravensbourne University London
London, UK
https://www.ravensbourne.ac.uk/people-and-stories/meet-team/carl-smith
c.smith@rave.ac.uk

This Symposium explores themes of digital art and identity with respect to Artificial Intelligence and the developing ideas of the “metaverse”. The paper provides some background to the concept of the metaverse in the context of digital culture. Then each participant provides a statement from their viewpoint and experience. These cover diverse issues based on the varied backgrounds and expertise of the contributors.

Artificial Intelligence. Digital art. Digital culture. Digitality. Identity. Metaverse.

1. INTRODUCTION

This paper records talks for a Symposium of invited speakers at the EVA London 2022 Conference. It continues a series from the previous five EVA London Symposia held since 2016 (Bowen & Giannini, et al. 2016–2021), which have been supported by the EVA London Conference (Bowen 2020).

The Symposium series initially started in association with the Pratt Institute London Summer School, with an emphasis on digital culture and “digitalism” or “digitality” (Bowen & Giannini 2014; 2021; Giannini & Bowen 2019a; 2019b). A collaboration with the Royal College of Art developed, providing an artistic and philosophical angle to the Symposium. Aspects of digital culture (Giannini & Bowen 2018; 2019a) continue in this year’s Symposium, which considers identity with respect to human and artificial intelligence in the sphere of digital art, and especially the advent of the “metaverse”. The speakers for this 2022 Symposium come from varied backgrounds, bringing their own perspectives to the overall theme.

2. THE METAVERSE

On 28 October 2021, Mark Zuckerberg announced by way of a burst of television advertisements (Meta 2021) that the parent company of Facebook, Instagram, WhatsApp, Messenger, and the virtual reality company Oculus is now called Meta Platforms Inc. Significantly, the advertisement begins in a museum gallery and zooms in on the jungle landscape of Henri Rousseau’s 1908 painting entitled Fight Between a Tiger and a Buffalo (see Figure 1 overleaf).

Meta’s advertisement incorporates key elements of the widely popular immersive exhibitions, especially Van Gogh. Rousseau’s painting is animated and seen through the eyes of engaged children with the implied melding of real and virtual, which in essence defines the immersive exhibition model and aesthetic sense of the metaverse to be – will that be a virtual world somewhere between digital art and Disneyland?
The only five words the advertisement contains, Zuckerberg puts into the mouth of the tiger – “this is the dimension of imagination.” So, not information, but human imagination and creativity, from which will be built a new “metaverse reality” (Meta 2021). With digital becoming increasingly embedded in the physical world, and when seeing and being in the metaverse is realised through the digitised human body, from headsets, eyeglasses, watches, body systems to neural networks of the human and artificial brain connecting imagination and creativity, the metaverse gives us new ways of communicating states of being through digital-physical beings as robots, embedding digital systems in physical place and space. One yet to be appreciated result, is the shift away from screens in favour of direct interaction. How will this impact human digital behaviour, when the computer and smartphone, the ever-present intermediaries between humans are augmented with more integrative technology like Virtual Reality (VR) and Augmented Reality (AR)? Will digital communication and interaction become part of a new reality of living between real and virtual worlds?

This means that the field of Human-Computer Interaction (HCI) shifts its focus from human interaction with computers to human-to-human interaction within the framework of computational culture, merging real and virtual worlds, so that human interactions reside more in a simulation of real/physical life. Once the metaverse is in full swing, will life be more akin to video games and a Disneyland-like landscape (see Figure 2)? Will humans become comic-book characters? Will the metaverse be like hell on earth, or heaven in cyberspace, a new Shangri-la – or a simulation of reality, the good, the bad, and the ugly (see Figure 3)?

**Cyber Identity by Tula Giannini**

I feared  
you wouldn’t come back  
Disappeared  
or hacked  
Lost in cyberspace  
No trace  
Can’t see your face

Send me a text  
Let me know  
what's next  
perplexed  
vexed  
Is your cyber identity dead  
Nothing read  
Nothing said

No – No – No  
I don’t want to let go  
Send me a sign  
you’re still mine  
still online  
Send me a kiss  
A wish  
A dream  
Last seen  
Don’t know when  
we’ll love again

Lost in cyberspace  
No interface  
Database down  
Lost not found  
in the metaverse  
Is the real story  
life in purgatory  
Locked down  
in the metaverse  
For better or worse

**Figure 1:** Fight Between a Tiger and a Buffalo (1908), by Henri Rousseau. The Cleveland Museum of Art. [https://commons.wikimedia.org/wiki/File:Henri_Rousseau_-_Fight_between_a_Tiger_and_a_Buffalo_-_1949.186_-_Cleveland_Museum_of_ArtFXD.jpg](https://commons.wikimedia.org/wiki/File:Henri_Rousseau_-_Fight_between_a_Tiger_and_a_Buffalo_-_1949.186_-_Cleveland_Museum_of_ArtFXD.jpg)

**Figure 2:** The Metaverse, a man skateboarding towards an imagined future metropolis. Freepic.com. [https://www.freepik.com/free-vector/man-skateboarding-future-metropolis-vector_4997265.htm](https://www.freepik.com/free-vector/man-skateboarding-future-metropolis-vector_4997265.htm)

**Figure 3:** Cyber Identity by Tula Giannini
3. SPEAKER STATEMENTS

Jonathan P. Bowen
London South Bank University, UK

Expo 2020: Metaverse of the World?

The international Expo 2020 exhibition, delayed due to the Covid pandemic, was held in Dubai, United Arab Emirates, from 2021 to 2022 (Expo 2020). It is in itself a “metaverse” of the world with pavilions of 192 countries presenting their national characteristics in any way that they wish, within varying financial restrictions. For example, the United Kingdom pavilion included a display of poetry generated from words supplied by visitors using Artificial Intelligence (AI) techniques (see Figure 4). In contrast, the Italian pavilion included a reproduction of the historic David carved by Michelangelo, generated from a very high-resolution digital scan of the original sculpture (see Figure 5). Other displays were more poignant with recent events, such as the Ukrainian pavilion where all electronic displays were replaced with the hashtag #StandWithUkraine.

Expo 2020 has its own associated apps, including a metaverse app paralleling the Expo 2020 site itself in a virtual world (Magnopus 2021). In addition, many of the larger pavilions include large electronic displays using AI, AR, VR, and Mixed Reality (MR) approaches. The presentation covers these aspects in more detail for a selection of pavilions at Expo 2020.

Figure 3: Domenico di Michelino, fresco painting, 1465, of The Divine Comedy by Dante Alighieri in the dome of the church of Santa Maria del Fiore in Florence. Dante holds his great poetic work, The Divine Comedy at the entrance to Hell, the seven terraces of Mount Purgatory and the city of Florence, with the spheres of Heaven above – reminiscent of Starry Night by Van Gogh! https://commons.wikimedia.org/wiki/File:Dante_Domenico_di_Michelino_Duomo_Florence.jpg

Each participant interprets the symposium theme in the context of their own life and work. Then looking from the present into the future, how has art, identity and human digital behaviour been transformed and what will it mean to be human in a post-Covid, post-digital world (Giannini & Bowen 2021; 2022a; 2022b)?

Figure 4: The United Kingdom pavilion at Expo 2020 with ever-changing AI-generated poetry produced from words supplied by visitors.

Figure 5: Michelangelo’s David scanned digitally and then reconstituted, in the Italian pavilion at Expo 2020. Note the heart-shaped pupils in the eyes, not easily visible in the original sculpture due to its height.
Chris Michaels
National Gallery / King’s College London, UK

National Gallery X – Creative R&D in a time of change

This presentation describes the story so far of National Gallery X (NGX). NGX is an innovation lab launched in 2019 by The National Gallery and King’s College London (NGX 2019). Its purpose is to experiment at the boundaries between art, media, research, and technology inside a discipline now being widely understood as Creative R&D. Over the period since its launch, NGX has experimented in areas as diverse as climate change and the representation of gender, brain-computer interfaces, artificial intelligence, and immersive exhibitions (see an example NGX commission in Figure 6).

However, NGX’s story is also one shaped by the pandemic and our understanding – and misunderstandings – of what the future (and present) might really look like. This presentation grounds NGX and the wider growth of Creative R&D in a broader view of technology and social innovation, revealing what it means to innovate inside public institutions.

Biography
Chris Michaels is Director of Digital, Communications and Technology at The National Gallery. He is a Senior Visiting Research Fellow at King’s College London and a Creative Industries Fellow at the UK Arts and Humanities Research Council (AHRC). He is a Bloomberg Technology Fellow and was named by Ericsson as a 5G Trailblazer. He acts as an advisor to global cultural and government organisations. He has a PhD from the University of Bristol and an MPA (Master of Public Administration) from University College London.

Figure 6: Please Enter by Dennis Osadebe, from “The Rules Do Not Apply”, an NGX commission.

Carl Hayden Smith
Ravensbourne University London, UK

Exploring the Ethical Challenges of the Open Metaverse

This presentation explores the ethical challenges of the emerging open metaverse based on two projects:

i) ‘Volumetric as a Service’ – with the proliferation and democratisation of volumetric capturing facilities and devices what happens to identity as we move from 2D photography to 3D point clouds?

ii) XPRIZE Rapid Reskilling ‘Neuro-Adaptive Mixed Reality Training platform’ (REAP technologies) – how to develop immersive XR application areas with the help of AI, Machine Learning and Sensory Augmentation.

A significant aspect of the metaverse is that it is a merging of your representation in the real world with a digital representation of yourself in the digital world. Digital twins make up the fabric of the metaverse, where the virtual and the digital are connected through a network of sensors. Already certain mobile phones with their inbuilt lidar technology can create a 3D point cloud of any environment that you are in. This has a direct impact on our privacy. When Google Glass was released, it was immediately banned in department stores as it was deemed an unacceptable invasion of privacy. Now however, depth sensors are being built into all sorts of devices and ethical mechanisms for protecting one’s body image and possessions have not been well established. Welcome to the digital twinning of your personal.
context. By wearing an AR headset such as the Microsoft Hololens, you by default are generating 3D models of everything you see, this includes other people. The issue is that once your body image has been captured, it can be used, ad-infinitum in deep-fake productions (see Figure 7 and an example Masters and Robots commission in Figure 8).

Once Apple releases its AR headset, the impact on our behaviour will be as dramatic as when the original iPhone was released. Ethical issues will erupt because, through the simple act of looking, we will be making new realities with our eyes.

Volumetric capture studios are springing up all over the world. In light of the Covid pandemic, virtual production techniques have exploded, and the construction of the matrix is firmly underway. Frameworks for how the products of these studios should be used have yet to be formulated. The Non-Fungible Token (NFT) could be used as one way to protect your body image Intellectual Property (IP). This means you would be the rightful owner of your digital self. In this presentation we reflect on how the physical world will itself become an interface, making reality even more machine-readable, clickable, and searchable.

**Biography**

Carl H. Smith is Interim Head of Research, Director of the Learning Technology Research Centre (LTRC) and Principal Research Fellow at the Institute for Creativity & Technology, Ravensbourne University London. Carl has 20 years’ experience conducting R+D in the application of hybrid technologies for perceptual, cognitive and creative transformation. He is focused on using both technological and biological means to alter, probe and study the spectral nature of consciousness. His research focuses on generating new forms of media including Neuroadaptive Mixed Reality Training, Natural Media and Wearable experience (WE). Raising over £10 million in research funding, Carl has worked on numerous largescale Leonardo LifeLong Learning, Erasmus+, FP7, XPRIZE and Horizon European projects including Wearable Experience (WEKIT), REAP, AR4EU (Code Reality), Hobs Academy (LLDC), Hyperhumanism, Contextology (Context Engineering) and Holotechnica.Academy. Carl has given over 300 invited public lectures, conference presentations and keynotes in 40 countries and published more than 100 academic papers. His research interests include Embodied Cognition, Spatial Literacy, Umwelt Hacking, Sensory Augmentation, Artificial Senses and Body Hacking.
4. CONCLUSION

**Abandoned Avatar (Figure 9) by Tula Giannini**

My avatar abandoned
Landed too far from reality
Just an avatar floating in cyberspace
Can’t retrace the place
called home
Lost my virtual phone
Don’t see a pub or bar
Cyber death not too far
A surreal experience
No artificial intelligence
No relevance
System down

![Abandoned Avatar](image)

*Figure 9: Tula’s avatar – I’ve been cartoonized!*

SocialBook. https://socialbook.io

This paper records an overview of the speakers’ statements with respect to digital art and identity, especially in the context of AI and in the light of the developing metaverse. The issues have been developed by the EVA London 2022 Symposium contributors from varied viewpoints. The paper acts as a starting point for the presentations during Symposium, aimed at promoting further discussion.

What kind of metaverse will be created? Surely, there will be more than one metaverse, and hopefully, there will be a metaverse created by and for digital art and artists. Although computing and technology are driving the computational framework of the metaverse, its design and aesthetic will require digital artists and designers capable of rendering a creative and innovative vision of virtual worlds.

Online information concerning the EVA London 2022 Symposium is available under:

http://www.eva-london.org/eva-london-2022/symposium/

**Acknowledgements**

The EVA London 2022 Symposium was supported as part of the EVA London 2022 Conference. Jonathan Bowen is grateful to Museophile Limited for financial support.

5. BIBLIOGRAPHY

Bowen, J. P. (2020) A personal view of EVA London: Past, present, future. In Weinel et al. (2020), pp. 8–15. DOI: 10.14236/ewic/EVA2020.2

Bowen, J. P., Diprose, G., and Lambert, N. (eds.) (2016) *EVA London 2016: Electronic Visualisation and the Arts*. BCS, Electronic Workshops in Computing. ScienceOpen. DOI: 10.14236/ewic/EVA2016.0

Bowen, J. P., Diprose, G., and Lambert, N. (eds.) (2017) *EVA London 2017: Electronic Visualisation and the Arts*. BCS, Electronic Workshops in Computing. ScienceOpen. DOI: 10.14236/ewic/EVA2017.0

Bowen, J. P. and Giannini, T. (2014) Digitalism: The new realism? In K. Ng, J. P. Bowen, and S. McDaid (eds.), *EVA London 2014: Electronic Visualisation and the Arts*. BCS, Electronic Workshops in Computing, pp. 324–331. DOI: 10.14236/ewic/EVA2014.76

Bowen, J. P. and Giannini, T. (2016) From analogue to digital in literature and art. In Bowen et al. (2016), pp. 1–4. DOI: 10.14236/ewic/EVA2016.1

Bowen, J. P. and Giannini, T. (2021) Digitality: A reality check. In Weinel et al. (2021), pp. 12–19. DOI: 10.14236/ewic/EVA2021.3

Bowen, J. P., Giannini, T., Ara, R., Lomas, A., and Siefiring, J. (2019) Computational Culture and AI: Challenging human identity and curatorial practice. In Weinel et al. (2019), pp. 1–9. DOI: 10.14236/ewic/EVA2019.1

Bowen, J. P., Giannini, T., Falconer, R., Magruder, M. T., and Marconi, E. (2021) Beyond Human: Arts and identity between reality and virtuality in a post-Covid-19 world. In Weinel et al. (2021), pp. 7–11. DOI: 10.14236/ewic/EVA2020.2

Bowen, J. P., Giannini, T., and Polmeer, G. (2017) Coded communication: Digital senses and aesthetics, merging art and life. In Bowen et al. (2017), pp. 1–8. DOI: 10.14236/ewic/EVA2017.1

Bowen, J. P., Giannini, T., Polmeer, G., Falconer, R., Miller, A. I., and Dunn, S. (2020) States of Begin: Art and identity in digital space and time. In Weinel et al. (2020), pp. 1–7. DOI: 10.14236/ewic/EVA2020.1
Bowen, J. P., Giannini, T., Polmeer, G., Gannis, C., Gardiner, J., Kearney, J., Wands, B., and Weinel, J. (2018) States of Begin: Art and identity in digital space and time. In Bowen et al. (2018), pp. 1–7. DOI: 10.14236/ewic/EVA2018.1

Bowen, J. P., Weinel, J., Diprose, G., and Lambert, N. (eds.) (2018) EVA London 2018: Electronic Visualisation and the Arts. BCS, Electronic Workshops in Computing. ScienceOpen. DOI: 10.14236/ewic/EVA2018.0

Copeland, B. J., Bowen, J. P., Sprevak, M., Wilson, R., et al. (2017) The Turing Guide. Oxford University Press.

Expo 2020 (2020) Visitor Guide. Expo 2020 Dubai LLC, Medina Publishing. http://expo2020dubai.com

Giannini, T. and Bowen, J. P. (2016) Curating digital life and culture: Art and information. In Bowen et al. (2016), pp. 237–244. DOI: 10.14236/ewic/EVA2016.46

Giannini, T. and Bowen, J. P. (2018) Of museums and digital culture: A landscape view. In Bowen et al. (2018), pp. 172–179. DOI: 10.14236/ewic/EVA2018.34

Giannini, T. and Bowen, J. P. (eds.) (2019) Museums and Digital Culture: New Perspectives and Research. Springer, Series on Cultural Computing. DOI: 10.1007/978-3-319-97457-6

Giannini, T. and Bowen, J. P. (2019a) Digital culture. In Giannini & Bowen (eds.) (2019), chapter 1, pp. 3–26. DOI: 10.1007/978-3-319-97457-6_1

Giannini, T. and Bowen, J. P. (2019b) Museums and digitalism. In Giannini & Bowen (eds.) (2019), chapter 2, pp. 27–46. DOI: 10.1007/978-3-319-97457-6_2

Giannini, T. and Bowen, J. P. (2021) Museums at the crossroads: Between digitality, reality, and Covid-19. In V. Cappellini (ed.), EVA 2021 Florence Proceedings, pp. 48–55. Leonardo Libri. DOI: 10.31235/osf.io/2g567

Giannini, T. and Bowen, J. P. (2022a) Museums and Digital Culture: From reality to digitality in the age of COVID-19. Heritage, 5(1):192–214. DOI: 10.3390/heritage5010011

Giannini, T. and Bowen, J. P. (2022b) Computational Culture: Transforming archives practice and education for a post-Covid world. ACM Journal on Computing and Cultural Heritage, 15. DOI: 10.1145/3493342

Magnopus (2021) Expo 2020 Dubai enters the metaverse world connecting millions across the physical & digital globally. NewsDirect, 7 December. URL: https://newsdirect.com/news/expo-2020-dubai-enters-the-metaverse-world-connecting-millions-across-the-physical-and-digital-globally-652848762

Meta (2021) The Tiger & The Buffalo. YouTube, 4 November. URL: https://youtu.be/G2W9YYkkn9U

NGX (2019) National Gallery X: Tomorrow’s museum now. The National Gallery, UK. URL: https://www.nationalgallery.org.uk/national-gallery-x/national-gallery-x

Smith, C. H. and Templar Lewis, K. (2021) The Metaverse: A New World of Extended Reality. Masters and Robots, Poland. YouTube. URL: https://youtu.be/bHXEPdwh5ws

Weinel, J., Bowen, J. P., Borda, A., and Diprose, G. (eds.) (2021) EVA London 2021: Electronic Visualisation and the Arts. BCS, Electronic Workshops in Computing (eWiC). ScienceOpen. DOI: 10.14236/ewic/EVA2021.0

Weinel, J., Bowen, J. P., Diprose, G., and Lambert, N. (eds.) (2019) EVA London 2019: Electronic Visualisation and the Arts. BCS, Electronic Workshops in Computing. ScienceOpen. DOI: 10.14236/ewic/EVA2019.0

Weinel, J., Bowen, J. P., Diprose, G., and Lambert, N. (eds.) (2020) EVA London 2020: Electronic Visualisation and the Arts. BCS, Electronic Workshops in Computing. ScienceOpen. DOI: 10.14236/ewic/EVA2020.0