Data-Doppelgänger: Infinite Regress

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Abstract

This paper presents and discusses the work "Data-Doppelgänger: Infinite Regress" (2023-2024), a dialogical NFT Exploration Inspired by Victoria Vesna's 'Bodies Incorporated" and revisiting Roy Ascott's considerations on the 'multiple self' emerging as a transformative art installation connected to the ISEA 2024 sub-theme, 'Ecologies of Place.' This immersive experience navigates the interplay of physical, digital, and ecological elements that shape our perception of place — interweaving our presence and identity in physical and digital realms. Participants engage in a participatory creation process, contributing personal data to algorithmic generation, resulting in NFT-driven avatars. The installation mirrors the layered ecologies outlined in ISEA's theme, highlighting the interactions between human, non-human, and technological entities. It serves as a dynamic exploration of sustainable and interconnected spaces in the digital age. Inspired by Roy Ascott's concept of 'Multiple Self' and in alignment with the Everywhen, 'Data-Doppelgänger: Infinite Regress" (2023-2024) offers a reflective journey into the multiplicity of identities within our contemporary landscapes. A TV screen becomes a nexus for the convergence of physical and digital realities, where the creation of NFTs intertwines with the organic, fostering a sense of ownership in the participants. As an homage to Vesna and Ascott's visions, the installation transforms personal narratives into a collective artwork, transcending boundaries and contributing to the discourse on ecologies that intertwine the human, the digital, and the ecological in the ever-evolving digital age."

Keywords

Data-Doppelgänger, Data Doubles, Human and Non-human Agents, NFtzation of the self, Multiple Self, Digital Ecologies, NFTs, identity.

Introduction

A popular plot device is the "doppelganger," which is a living, breathing, biologically unrelated person who resembles us. Modern technology, social media, and big data collecting have made it possible to create new types of digital proxies and doubles. A person's "data double" is taken and exploited covertly against its human model in certain modern retellings of the doppelganger myth, a byproduct of Big Tech's ravenous thirst for monetizing and exploiting our identities. However, some accounts of similar "doubling" speak of a more personal experience.

We live in a world where digital identities are commonplace but frequently unreliable, thanks to AI technologies that seek to mimic our chats with departed loved ones and phones that are more aware of our behaviors than we are. In an attempt to mimic the unique abilities, tastes, behaviors, or knowledge of a particular human, commercial AI projects aim to create their own "digital doppelgänger." This doppelganger is sometimes seen as someone to be prodded, convinced, and manipulated. Occasionally, the goal is to assist and encourage human ingenuity and productivity and these digital others are scrutinized, surveilled, and in certain circumstances even created by governments and corporations in addition to being developed and generated online by individuals.

According to Hagerty and Ericson [1], the idea of a "data double" is not wholly new. Nevertheless, contemporary or Big Data and AI-era interpretations contribute to a lengthy history of what it means for data to represent ourselves. But as sensing, monitoring, and data storage have advanced, their reality has become more pervasive and frequently less consenting. The collection of self-tracking data can also lead to the creation of new identities that pose issues regarding their ownership and validity by reflecting and mirroring the user back (Ruckenstein 2014). Crucially, this "doppelgangering" can be used to target interventions as well as put in place additional monitoring, surveillance, and governance systems.

"Data Echoes: A Dialogical NFT Exploration Inspired by 'Bodies Incorporated'" establishes a compelling connection to Haggerty and Ericson's seminal arguments on the 'data double,' as outlined in their influential work from 2000. The installation serves as a contemporary manifestation of their prescient insights into the duality of identity in the digital realm.

Drawing upon Haggerty and Ericson's conceptualization of the 'data double'[1] —the idea that individuals generate digital counterparts through the collection and analysis of personal information—"Data-Doppelgänger: Infinite Regress" (2023-2024) extends this notion into the realm of artistic expression and participatory creation. Participants actively contribute to the formation of their digital doppelgangers by submitting personal data, aligning with Haggerty and Ericson's recognition of the digital self as an entity shaped by information.

The installation echoes the concerns raised by Haggerty and Ericson [1] regarding surveillance, profiling, and the potential commodification of personal data. By transforming these concerns into an immersive art experience, the installation prompts participants to confront the implications of their 'data doubles' becoming tangible, ownable entities in the form of NFTs. The dynamic interplay between identity, data, and ownership within the installation serves as both an homage to and a critical reflection on the arguments presented by Haggerty and Ericson in the early discussions of the 'data double.' Through this connection, the artwork engages with the ongoing discourse on digital identity, surveillance, and the commodification of personal information in the digital age.

Drawing on the theories of Gilles Deleuze and Felix Guattari, Haggerty and Richard [1] hope to reexamine some of the more well-known theoretical concerns surrounding surveillance. They propose that we are seeing a convergence of what were once discrete surveillance systems to the point where we can now refer to an emerging "surveillant assemblage." For this assemblage to function, human bodies are abstracted from their geographical contexts and divided into several distinct flows. After that, these flows are put back together to create unique "data doubles" that can be examined and the subject of action. In the process, the hierarchy of monitoring is rhizomatically leveling, observing groups that were not subject to routine surveillance before becoming more and more under observation.

Data-Doppelgänger: Infinite Regress" (2023-2024) can be understood as an NFT exploration of data-doubles inspired by Victoria Vesna's 'Bodies Incorporated' that intricately weaves through the discourse on digital identity and ownership, drawing insights from Minna Ruckenstein's reflections on our engagements with data doubles [2]. Within the installation's dynamic interplay of physical and digital realms, participants actively contribute to the creation of their NFT-driven avatars, embodying Ruckenstein's discussions on the evolving nature of ownership in the digital age.

Ruckenstein's exploration [2] of ownership in digital spaces underscores the transformative power of personal data. 'Data Echoes' translates this concept into a tangible experience, where participants witness their personal narratives transformed into NFTs, solidifying ownership of their digital counterparts. The installation becomes a reflective space, encouraging participants to confront the implications of data ownership and the commodification of digital identities.

By aligning with Ruckenstein's insights [2], the installation offers contemplation on the shifting dynamics of ownership within the context of personal data and NFTs. The blockchain transactions intend to become a testament to the decentralized and transparent nature of ownership, resonating the multifaceted dimensions of digital ownership.

Personal Data and a Corporate Body

UCLA Professor Victoria Vesna, who received a Ph.D. from the University of Wales Centre for Advanced Studies in Interactive Arts CAiiA-STAR in 2000, having Roy Ascott as her advisor, considers that the primary distinction in technology in the past two decades is the widespread use of computers and networks, which are bringing forth a new mode of existence and interaction in day-to-day activities. This naturally helps the audience relate to the work and sets the expectation for more nuanced messages from the technologically interactive pieces. Put another way, the potential and perception of interactivity and social networks represent possibly the biggest change, just as the power of vast rooms of early computers is now similar to that of mobile phones.
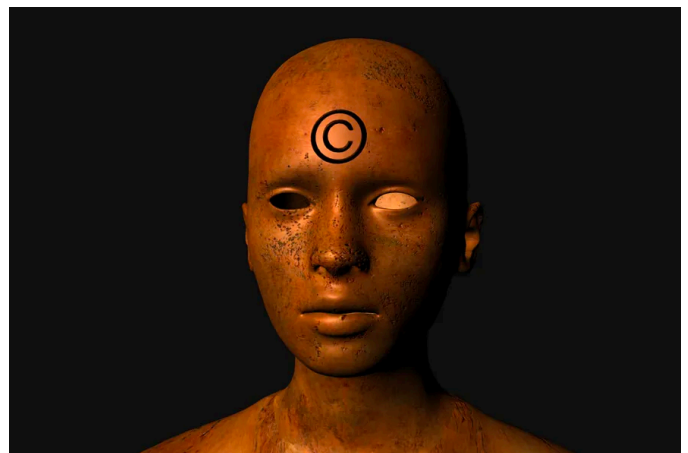

Figure 1. Bodies Corp 2.0, Credit: Victoria Vesna for Ars Electronica [3] https://ars.electronica.art/aeblog/en/2016/03/11/victoria-vesna-interactive-art/

For Vesna [3] "Much that was theoretical and visionary at the time is now commonplace and mundane." In relation to her production she observes that,

> "For instance, for my thesis I developed two online projects: Bodies INCorporated in which all of your personal data was owned by a Corporate body and you had no rights, and that of the Information Personae (note the plural) – a work that maps your connections to others and your value and power in society would be based on the amount of time people would spend on your information. I called this project N0time: Building a Community of People with No Time. Although created somewhat cynically, it all seems to have come true and now this is common-place and these new ways of social interaction and market power structures are normalized." [3]

Vesna has a draft of Bodies Corp 2.0 in which the corporation "protects" the person's 'third eye' and theirs' unconscious mind — being the transactions made with bitcoin and all is on a cloud, as the artist explains [3].

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"The individual human presence of the individual human self, a unitary and undivided personality, has become the multiple, distributed presences of a set of many selves, of multileveled, complex, diverse personalities—l'homme éclaté, as Paul Virilio has called it.[4]

As Roy Ascott places when writing about 1992 Telenoia [4] the most significant impact of our culture's telematization may be the explosion of the one and the connectedness of the many. One may argue that the only thing that has equaled the significance of the zero's arrival in Western [4] thought is the loss of the one, the lone and isolated person whose boundaries and isolation were hermetically complete. Roy believes that our inclination is toward interconnectivity.

One important aspect of the evolutionary process is connectivity. We have the whole concept of togetherness in mind. According to Ascott [4] our multifaceted personalities require more support than a single body or a single, stationary presence could provide. Psychology is ill-equipped to handle the demands of telepresence in a society that is telematic.

The interactive installation "Data-Doppelgänger: Infinite Regress" (2023-2024), is a multimedia installation that pays homage to Victoria Vesna's groundbreaking work 'Bodies Incorporated' while inviteing participants in an interactive journey of digital doppelgangers and the NFTzation of our identities. Anchored by a singular screen, this installation invites participants to actively shape their unique NFT-driven avatars, echoing the spirit of collaboration found in 'Bodies Incorporated.'

Drawing inspiration from Vesna's exploration of the intersection between bodies and technology, participants are invited to contribute personal data by filling out a form or agreement. — giving the artist or 'the system' the right to use their data. This interactive input becomes the catalyst for the algorithmic generation of bespoke digital doppelgangers, creating a dynamic link between individual narratives and the evolving artwork.

The screen, encapsulating fragments of personal identities, transforms into a dynamic canvas where the algorithm weaves together the diverse qualities of each participant, echoing the dialogical nature of 'Bodies Incorporated.' The singular screen becomes a portal into the individualized digital realms. — and infinite regress into our 'multiple selves'.[3]

Each participant's digital doppelganger is minted as an NFT, symbolizing ownership and uniqueness. The blockchain transactions, displayed on the screen, underscore the participatory and decentralized essence of the artwork. The installation prompts a thoughtful exploration of the NFTization of identities, where personal data transforms into blockchain-secured assets. It raises questions about the commodification of digital selves, the ownership of identity in the digital age, and the implications of blockchain technology on the intersection of art, technology, and personal expression.

Participants are encouraged to reflect on the evolving relationship between identity, data, and the transformative potential of participatory art, drawing parallels to the dialogical nature found in Victoria Vesna's 'Bodies Incorporated.'
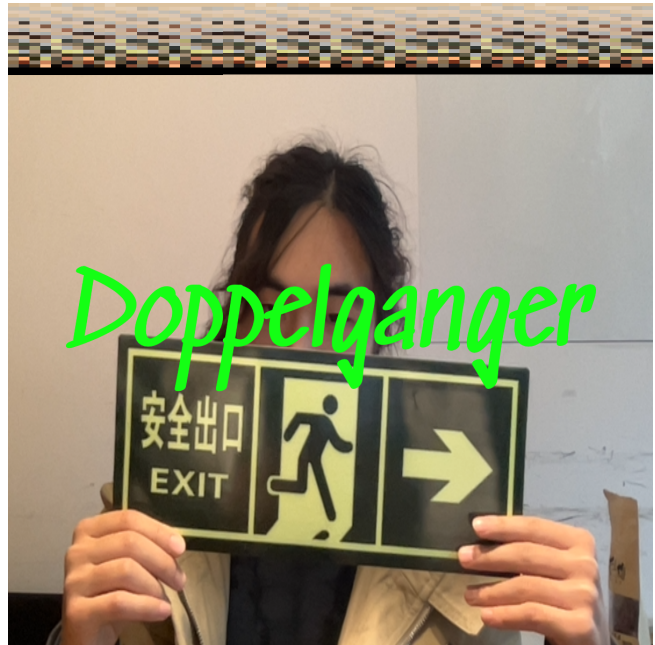

Figure 1. NFT generated in P5JS and exported as a screenshot. Image by the author.
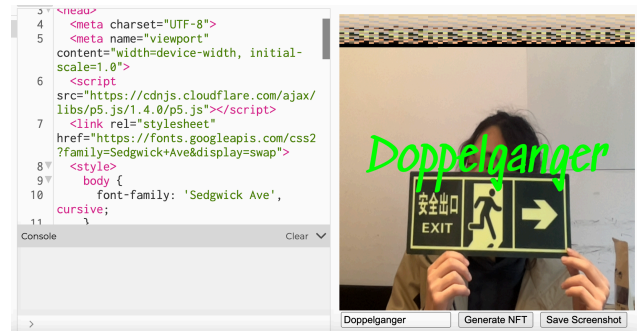

Figure 2. Interface and code in P5JS for NFT generation showing users' input fields. Image by the author.

From participant's data coming from the agreement or form that provides specific personal preferences, traits, and experiences, data input becomes the foundation for the algorithmic generation of each participant's unique digital doppelganger.

The algorithm processes the individualized inputs, translating them into visual elements that include stylistic choices, color schemes, and symbolic representations based on the participant's experiences — as if the self becomes a cloud, not a body that resembles human bodies but instead 'a distributed-cloudy ID card'— and preferences.

The algorithm creates a representation of the participant's data-infused identity. The generated digital artwork is then minted as a non-fungible token (NFT) on a blockchain platform. Each participant receives a unique NFT that acts as a digital certificate of ownership for their specific digital doppelganger.

This NFT is securely stored on the blockchain, ensuring its authenticity and scarcity. The singular screen within the installation displays real-time blockchain transactions, symbolizing the minting and ownership transfer of the NFTs. Participants can witness the decentralized and transparent nature of blockchain technology, highlighting the authenticity and uniqueness of their digital identities.

Participants can use their smartphones to interact with the displayed blockchain transactions, exploring the details of their NFTs and gaining insights into the ownership history. The NFTs become a tangible representation of each participant's involvement in the creation process, fostering a sense of ownership and connection to the evolving artwork.

Final Considerations

The interactive installation "Data-Doppelgänger: Infinite Regress" (2023-2024) serves as a testament to the continuous dialogue between humanity and the ever-expanding digital landscape, offering a unique and interactive experience that echoes the interconnectedness of personal narratives and the limitless possibilities within the NFT frontier.

Revisiting Roy Ascott's considerations on the 'Multiple Self,' the installation prompts participants to contemplate the fluid and dynamic nature of their digital identities. Ascott's ideas on the distributed and interconnected self within a technological framework find resonance in the participatory and multifaceted experience of creating NFT-driven avatars. The installation encourages participants to reflect on the evolving relationship between identity, data, and the transformative potential of participatory art.

"Data-Doppelgänger: Infinite Regress" (2023-2024) explores the continuous dialogue between humanity and the ever-expanding digital landscape, offering a unique and interactive experience that echoes the interconnectedness of personal narratives and the limitless possibilities within the NFT frontier, influenced by the considerations of 'Multiple Self' in telematic art.

References

[1] Kevin D. Haggerty and Richard V. Ericson (2000), "The Surveillant Assemblage," The British Journal of Sociology, 51, pp. 605-22, in Joseph Savirimuthu, Security and Privacy Vol III, The British Journal of Sociology,2010, ed.1., accessed on December 4, 2023, https://www.taylorfrancis.com/chapters/mono/10.4324/9781315243566-16/kevin-haggerty-richard-ericson-2000-surveillant-assemblage-british-journal-sociology-51-pp-605-22-joseph-savirimuthu

[2] Minna Ruckenstein, "Visualized and Interacted Life: Personal Analytics and Engagements with Data Doubles," Societies 2014, 4, 68-84, accessed on December 4, 2023, https://doi.org/10.3390/soc4010068

[3] Victoria Vesna, "The Essential Challenge of Interactive Art," interviewed by Martin Hieslmair on 11 March 2016 for ARS ELECTRONICA BLOG, accessed on December 4, 2023, https://ars.electronica.art/aeblog/en/2016/03/11/victoria-vesna-interactive-art/

[4] Roy Ascott, "Chapter 18 'Telenoia' (1993)," In Roy Ascott, Telematic Embrace, Theories of Art, Technology, and Consciousness, edited by Edward A. Shanken, Berkley and Los Angeles, the University of California Press, 2003, p. 265-275.

Acknowledgments

Authors Biographies

Zhu Yuheng, born in Shanghai, China, is currently a 4th-year undergraduate student at Roy Ascott Studio Advanced Program in Technoetic Arts. His artworks focus on cyborgs, totalitarianism, and the metaverse. He is interested in the study of new media, the practice of the digital field, and the use of computer modeling and creative coding. Zhu Yuheng's work explores the relationship between humans and technology — he is interested in how technology can be used to create new forms of art and expression. He is also aware of the potential dangers of technology, such as the loss of privacy and the rise of totalitarianism.

Dr. Clarissa Ribeiro, Program Coordinator of the Roy Ascott Studio Advanced Program in Technoetic Arts at SIVA/DeTao in Shanghai, has been honored with the Pete Townshend Endowed Senior Lectureship in Performative Technoetics (2022-2024). Ph.D. in Arts (ECA USP Brazil, Poéticas Digitais/CAiiA hub of The Planetary Collegium, UK), Fulbright Postdoctoral Scholarship awardee (UCLA, Art|Sci Center/James Gimzewski Lab, USA), M.Arch. (IA USP, Brazil), B.Arch, member of the UCLA Art|Sci Collective (2013-present), is the chair of the first Leonardo/ISAST LASER talks to be hosted in Brazil/Latin America (2017-present). The core of her explorations is the interest in cross-scale information and communication dynamics that impact and shape macro-scale emergent phenomena. She has been exploring the metaphysics of information visualization in subversive morphogenetic strategies that welcome the animistic to navigate ecologies as cosmologies.

Huang Wei, digital director, and transmedia artist, graduated from Washington University in St. Louis with an MFA, is a lecturer and researcher in the Shanghai Institute of Visual Arts (SIVA) Department of Digital Media Art and a lecturer at Roy Ascott Studio Advanced Program in Technoetic Arts. Huang often works in collaboration with multimedia artists producing interactive installations, and performances, focusing on cross-media spatiotemporal experiences. Huang Wei has been selected for awards/festivals such as the Lumen Prize, and Ann Arbor Film Festival, and exhibited/performed in important institutions such as Shanghai Concert Hall, Shaanxi Opera House, and the Kemper Art Museum.