Digital Flesh – Scar in Data: Remediating and Performing the Korean Female Body

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Abstract

Digital Flesh – Scar in Data is a multimedia performance that transforms the representation of the South Korean female body into a dynamic interface using live cinema, computer vision, reactive sound, and augmented reality. This project examines the role of technology in body objectification, delving into the intricate boundaries between corporeality and virtual representation. This practice-based research prompts a re-imagination of cultural identity, gender, and a human-machine relationship, exploring the multilayered aspects of posthuman experiences in performative creative practices.

Keywords

Multimedia Performance, Posthuman, Corporeality, Re-mediation, Sound Art, Live Cinema

Introduction

Digital Flesh – Scar in Data is a multimedia performance that pushes the boundaries of corporeality using real-time digital technologies to recreate bodily images and sounds. This practice-based research project delves into the ways digital technology objectifies and represents the human body, with a particular emphasis on the body of the South Korean woman. Through a combination of live cinema, an interactive music system, and augmented reality (AR), the project navigates the intricate relationship between the physical and the virtual. This juxtaposition of liveness in different technologized contexts allows the artists to exceed the limitations of purely digital representations of human appearances and movements.

Digital Flesh – Scar in Data was showcased in both Kingston, Canada, and Seoul, Korea, employing a blend of live video projection and performance art. During the performance, computer vision technology scanned body images to generate sounds based on shapes and movements. The performance concluded with juxtaposed body images becoming markers for an interactive AR experience, inviting the audience to engage with the digital representations of the body in a dynamic and interactive way.

In *Digital Flesh – Scar in Data*, the posthuman perspective is exemplified as the project reimagines the human body as a dynamic interface [1] [2]. Rosi Braidotti describes the "posthuman predicament" as one that encourages us to take a leap forward into the complexities and paradoxes of our times" [3]. The multimedia performance project explores the dilemmas and possibilities of how transformation of corporeality manifests in the digital age. Whereas some practitioners and scholars seek to envision and create a world where emerging and not yet known technologies eliminate issues of race and gender, the project described herein approaches a posthuman perspective that does not do away with difference. Unlike a post-racial imaginary, this multimedia performance understands technology is not race neutral [4]. As Rachel C. Lee argues, it is ever more important to grapple with cultural anxieties around Asian diasporic bodies "in an era that is reconceptualizing the body in informational, molecular, and posthuman terms" [5]. Instead of shying away from such difficulties, the collaboration between Sojung Bahng and Mike Lukaszuk leans into a different iteration of the posthuman interface.

As *Digital Flesh – Scar in Data* navigates the boundaries of corporeal and virtual realms, it blurs the once-distinct lines between human and machine. Following Katherine Hayles, this project posits that digital technology has the power to both objectify and reconstruct corporeal representations [6]. Human machines and machinic humans proliferate out into temporary and shifting entanglements that remake understandings of the human and the machine. Moving away from cultural techno-determinism, this article advocates a move towards posthuman media arts practices. This emphasis on practice focuses on how the relationship between the artists and the technologies is vital. Akin to how Karen Barad describes intra-actions in which "boundaries are reconfigured, 'interior' and 'exterior' are reworked," Bahng and Lukaszuk move and change the component parts [7]. They do not obliterate difference but instead enact intra-actions in which discontinuity disrupts an easy teleological trajectory— "there are no trajectories" [7].

The project actively engages in the process of remediation [8], emphasizing the transformative potential of new media in reshaping our understanding of corporeal representation and iteration within performance practice. The project remediates corporeality by translating the human body into digital forms, which embrace hypermediacy and foreground the

medium and interface—making the technological mediation visible to the audience [8] [9]. This deliberate exposure of the medium challenges the dominant modes and aims of objectification and representations that fantasize a singular body of the Korean woman, and further, it emphasizes the role of technology in transforming our perceptions [10].

Live cinema serves as a critical platform in *Digital Flesh – Scar in Data* for juxtaposing physical and digital realms, emphasizing its dynamic potential for engaging audiences in abstracted yet also immediate physical representations of the body. Within this project, live cinema acts as a conduit for the fusion of live video and algorithmic music, highlighting the performative aspects of corporeal non-progressive, that is discontinuous remediation [11] [12]. Through live performances, the work challenges the audience to reconsider boundaries and unmake easy distinctions between ideal physical selves and imagined virtual others.

Furthermore, the project incorporates computer vision for cultivating data that produces reactive sounds, where a webcam detects and analyzes the body as distinct objects, whose features are then mapped to sound parameters. These modes of extending sight and sound remake the idea of exteriority by interiorizing the machinic capacities into the body and likewise by extending the reach of the digital technology through Bahng's body. This unique approach transforms the capacities of the body, enacting body-as-instrument [13]. This extension of the body's abilities is temporally located within the performance and micro-movements of a body outside of choreography. Performance, thus, is an integral part of the multimedia amalgamation, making primary the sites of interaction as infinitely differential, each installation, a collection of differences, installed and remade as part of *Digital Flesh – Scar in Data.*

An essential aspect of the process of reshaping or recontextualizing present and digitally represented bodies using new media context and computer technologies is the emphasis on live performance as a method for disseminating the artworks that form this project. The perspectives on representation and transformation that we seek to explore stem from improvisation and often immediate (and sometimes imperfect) negotiations with technology, rather than an idealized representation of the body that relies on editing.

Digital Flesh – Scar in Data

Digital Flesh – Scar in Data is a multifaceted exploration of identity, culture, and technology, traversing the boundaries of art, technology, and human experience [3]. Developed in 2023 as a series of multimedia art projects, this collaborative endeavor blends live cinema, experimental sound, and AR to challenge and reimagine corporeal representation in the digital age.

Figure 1. Multimedia performance of *Digital Flesh – Scar in Data* featuring live improvisation and webcam processing. Seoul Artists' Platform_New&Young (SAPY), Seoul, South Korea.

Exploring Koreanness Through the Body

The project emerged from the creative minds of two distinct artists—a South Korean female artist residing in Canada, Sojung Bahng, and a Canadian male artist, Mike Lukaszuk, with deep-rooted ties to Korean culture. Their collaborative cross-cultural exploration aimed to investigate the concept of Koreanness within a Western context. They embarked on a creative journey to explore representation, but also to use the body and technology, the body as technology, and technology as the body to reimagine the affordances of artistic expression.

Bahng, drawing from her Korean background, embarked on a deeply personal exploration of Koreanness through her own body. Her creative process involved capturing various forms of her body images that could evoke illusions and archiving representations of the body of the Korean woman. These representations ranged from the spectral and ethereal to the suppressed and oppressed. In contrast, Lukaszuk focused on the auditory realm, archiving sounds and music associated with Korean women. His sonic archive encompassed a wide spectrum, from Korean drama Original Soundtracks (OSTs) to national songs sung by Korean women as well as traditional Korean music. Alongside the experimental sound design, Lukaszuk developed a digital musical instrument using AI-based computer vision tools to abstract and generate sound.

Bahng furthered her exploration of representation by extracting static images from the live video, employing a dry point printmaking technique. With a needle-like instrument, she meticulously re-materialized the digitized body images through physical printmaking activities. These unique printmaking images, alongside specially designed T-shirts, played a pivotal role in the creation of an AR piece. The AR component of *Digital Flesh – Scar in Data* augments the rematerialized body with a digital collage video, creating a

dynamic interplay between material and immaterial bodily representations and embodiments [14].

Figure 2. Augmented Reality Art of *Digital Flesh – Scar in Data*. Later adapted to t-shirt surfaces. Isabel Bader Centre for the Performing Arts. Kingston, Canada.

Throughout the live performance, Bahng wore a traditional Korean costume (Hanbok) that she had purchased from Amazon in Canada. This act raised questions about cultural authenticity, appropriation, and the intricate complexities of the diasporic experience [15]. Towards the culmination of the performance, she seamlessly transitioned from the Hanbok to wearing a T-shirt with images for AR-driven sonic and visual reactions, inviting the audience to actively participate in the process of remediating corporeal representation. These AR components in relation to the body of the Korean woman, or Bahng's body in relation to the technologies at play, want "to perform a reve(a)ling as part of its enactment. Neither the body nor the media disappear, but instead, they reappear as vectors for the expression and experience of art as both must be present in order to access AR art's invisible visualities" [16].

In its indeterminacy, *Digital Flesh – Scar in Data*, is also contextually remade through the geographies of its performance. If the work questions the limits of the body, technology, and of the racialized gender that animate it, then it does not do so universally. Performing in a Canadian context, Bahng dons a hanbok, a traditional Korean garment, with a wink, knowing and noting that it was purchased in Canada on Amazon. Performing in a Korean setting, the same wink loses its value and necessity, amplifying the technological transformation of the posthuman body, not as absent of difference, but as part of a larger collective within society. While in a Canadian context, Bahng is a racial minority, sexualized and gendered under the banner of a history of Western stereotypes, the context is displaced and reemerges as a discontinuity of the intra-actions of the posthuman interface. In is not that in one context she is postracial but rather that the imaginaries that demand a divorce from the body as raced and gendered shift. Within both contexts Bahng and *Digital Flesh – Scar in Data* participate in what Neda Atanasoski and Kalinda Vora call "dissident technological imaginaries" that challenge notions of postracial fantasies of AI and emerging technologies [17]. They do so in a manner that shifts and ripples in the environment, supplanting knowable trajectories with paradoxes of the posthuman.

Multimedia Performance

In the live performance, Bahng spontaneously juxtaposed her illusory body images with archival materials related to Korean women, utilizing a Musicial Instrument Digital Interface (MIDI) device for control. Simultaneously, she harnessed the power of computer vision through a webcam. This technological component enabled the real-time detection and analysis of her body's movements and shapes as distinct objects within the performance space. These complex data streams were then intricately mapped to affect the behaviours of sound parameters that Lukaszuk designed based on the aforementioned sound archive, resulting in the creation of multi-layered, generative soundscapes that were made through and with the performing body.

Lukaszuk's interactive system for computer vision with reactive sounds relies on a more nonspecific approach to object detection that utilizes binary large objects (blobs), rather than more targeted data-driven models that search for specific images. By using this approach, the performer or user has a greater sense of agency to make decisions about what can be detected by continuously reconfiguring the position of their body and the objects in the webcam view. This aspect of the project design reconfigures algorithmic power relationships, often structured by *black boxed* software. Tania Bucher's concept of "the algorithmic imaginary" is useful to describe how *Digital Flesh – Scar in Data* emphasizes the way in which users play a significant role in reconfiguring the algorithmic spaces that they occupy [18].

The project's audio-visual integration of computer vision also introduces salient questions about digital musical instrument design and performance. The detected objects essentially function as the "body" of a non-haptic musical instrument, with the movement of objects acting as a digital equivalent to non-virtual musical performance behaviors such as plucking strings or striking metal objects. By building the instrument based on data rather than physical components, the performer's interactions with the system put the corporeal nature of the instrument in a constant state of flux. Digitally rebuilding instruments through user interaction links to imaginative approaches to sound synthesis such as physical modeling, in which computer musicians speculate about the sounds of conventional musical instruments augmented beyond their real-world dimensions.

In these contexts, one of the central elements of *Digital Flesh – Scar in Data* lies in its collaboration with machine intelligence—a process that accentuates the tension between the naturally imperfect capacity of a computer to interpret the world through the identification of objects, and what seems to be distinctly human perception of embodied

experience. Rather than seeking perfection, the project capitalizes on the limitations inherent in computer automation and machine processes [19]. Imperfections, such as a bias for interpreting comparatively large objects, and a coded system of rules for identifying movements as non-spurious serve as tools to emphasize the indescribable nature of the body, here figured as the Korean woman, challenging dominant representations and the boundaries of flesh and data.
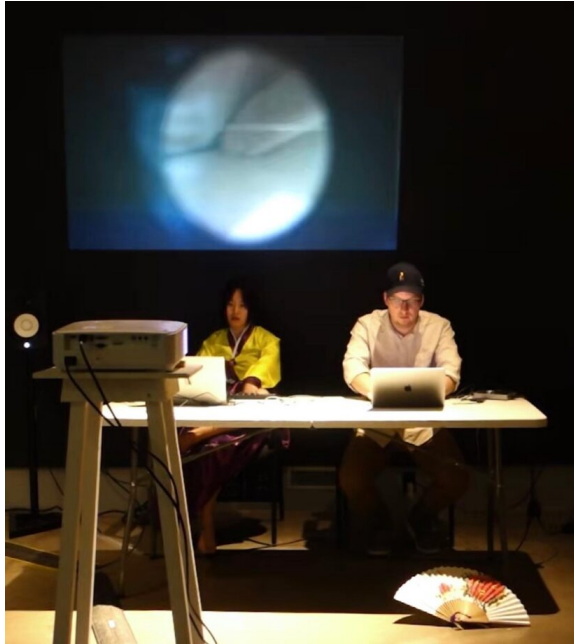

Figure 4. Live multimedia improvisation with live cinema and experimental sound performance. Art & Media Lab. Isabel Bader Centre for the Performing Arts. Kingston, Canada.

Conclusion

Digital Flesh – Scar in Data is a performance-based exploration that transcends the boundaries of corporeality, technology, and digital representation within the contexts of posthuman and remediation. The project reimagines the human body as a dynamic interface, challenging conventional notions of identity, gender, and unity with nature. The piece is bound up in troubling the stark ideas of a stagnant interior and exterior, while also thinking through the material and immaterial ways in which difference manifests in and on enfleshed bodies. From multimedia and performance, the work pays attention to the ways in which technology and its differentially iterated instantiations engender racial and cultural difference. Working through process-based artistic expression that cannot be replicated in whole, the artists create a posthuman arts practice. Through live cinema, computer vision for sound, and augmented reality, it navigates the intricate relationship between the physical and the virtual, blurring the once-distinct lines between human and machine. As a powerful testament to the transformative potential of technology and the body, *Digital Flesh – Scar in Data* invites audiences to engage in a thought-provoking journey that challenges normative boundaries, offering new perspectives on culture, identity, and the posthuman experience in the digital age.

Acknowledgements

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