

From Scars to Avatars: Translating lived experiences into Stylised Digital Representations

Lionel Wong^{1*} and Jamela Law Hoi Shan²

¹The Hong Kong Polytechnic University School of Design,

lionel-zhen-jie.wong@connect.polyu.hk

²Baëlf Design, jamela@baelfdesign.com

*Corresponding and presenting author

ABSTRACT

This paper focuses on the Digital Fashion / Art exploration titled “Scars, Skins and Styles: Phygital Transfigurations”, exhibited in early 2024 during the Singapore Art Week, which explored Fashion Design as an experimental Art Therapy tool for mediation, introspection and reinvention. By engaging with underrepresented individuals to co-design custom wearables informed by their needs, hopes and life experiences, the authors aimed to foster dialogue amongst themselves, participants, and audiences on pressing issues of inclusivity and mental health. This project sought to transform assumptions about wearables, bodies and their relationships with the world, through reimagining new, inclusive presentation formats that improved upon existing art therapy techniques using Enclothed Cognition. Through a co-design process, the authors created hyper-realistic digital embodiments of participants, enclothed in digital dresses that were tangible yet abstract manifestations of their emotions and memories. By preserving the tangible human aspects of art and fashion while allowing design-making to be democratised, the boundaries of physical materiality, transference and countertransference can be pushed and go hand in hand with the advancement of digital technologies. Through nurturing voices of the marginalised, the authors weaved them into a fabric of strength and compassion, and create positive changes in the face of familial, societal, and institutional resistance.

Keywords: Community co-designing, digital wearable, sustainable fashion, generative computation, art therapy

INTRODUCTION

Fashion is the Design of Change. Our skins go beyond morality and aesthetics. It is an embodiment of art, expression, and communication that reflects the values of our times. It is also about visual identity, a kind of storytelling that is so important in a world that does not always embrace individuality or differences. The authors believe that clothing is an extension of the wearers' identities and have the power to change their outlook on life. This is supported by the phenomenon of Enclothed Cognition, where it was found that artefacts on the body (i.e. clothing, accessories) have

systematic influence on wearers' psychological process.

Thoughtfully designed fashions can redefine notions about culture, connectivity, and empathy. They have the potential to empower and redefine social constructs by improving diversity, foster self-esteem, self-awareness, and cultivate emotional resilience.

In this project, the authors explored Fashion Design as an experimental Art Therapy tool for mediation, introspection and reinvention, by harnessing the phenomenon of Enclothed Cognition. Specifically, we engaged underrepresented individuals in the community to co-design custom wearables, informed by their needs, hopes and life experiences, to foster dialogue among artists, participants, and observing audiences on pressing issues of inclusivity and mental health. This was achieved by creating armours and second skins using digital technologies and fashion co-designing to promote empathy and healing. Through sharing of human experiences and utilizing the magic of creativity, we created warm-hearted, celebratory spaces that closed the gaps between ourselves.

We need connection more than ever in the technological age. This project sought authentic human-interest and relationships that transcend the material world, and transformed our assumptions about wearables, bodies and the world that enclosed us. The authors reimaged a novel presentation format that is inclusive and timeless, comprising of hyper-realistic 3D digital representations of participants, enclothed in manifestations of their heartfelt emotions and memorable experiences for their personal empowerment.

CONTEXTUAL REVIEW

Body Mapping

An anthropological research method first developed by MacCormack in 1985, Body Mapping today is an arts-based approach focusing on the embodied experience, which lends itself to exploration of sensory and psychological experience. (MacCormack, 1985; Boydell, 2020) It involves '... tracing around a person's body to create a life-sized outline, which is filled in during a creative and reflective process, producing an image representing multiple aspects of their embodied experience...'

Although conceived as a practice reliant on use of traditional art mediums, and demanding large amounts of physical space for the drawing of full-sized body maps, (Boydell, 2020, p. 48-49) newer approaches to Body Mapping utilising advanced digital technologies have arisen to mitigate these barriers brought about from physical constraints, such as the web-based body-mapping application by Ludlow (2021), the use of Virtual Reality by Ticho (2021), and technological wearables by Edwards (Edwards, 2021). Thus, the authors saw potential in incorporating the philosophy of

Body Mapping while simultaneously exploring the trend of technological integration within the multidisciplinary domain of Fashion Design for Therapy.

Enclothed Cognition

Adam and Galinsky conducted a study in 2012 supporting the perspective that "clothes can have profound and systematic psychological and behavioural consequences for their wearers". (Adam and Galinsky, 2012, p. 922) They found that the participants in their study wearing lab coats (prototypical attire of scientists and doctors, and thus signifying an emphasis on being careful and attentive) experienced increased levels of sustained attention while doing tasks. In their discussion, they suggest the clothing when worn could elicit certain behaviours, for example, individuals dressed as priests or judges take on exemplary behaviours and morals, or those in firefighter or police uniforms behaving more courageously. (Adam and Galinsky, 2012, p. 919-922)

Even though Adam and Galinsky suggested the effects of Enclothed Cognition are reliant on both the symbolic meaning of the attire as well as the physical act of wearing it, the authors argue that this physical action can be supplanted with the empathetic effect of seeing one's facsimile in symbolic dress. That is, when one observes one's avatar wearing an outfit filled with personal symbolic meanings, the sensation one feels is equivalent to the effect of Enclothed Cognition.

METHODOLOGY

Adopting the lens of Symbolic Interactionism and its worldview that people are motivated to act based on the meanings they assign to people, things, and events, (West and Turner, 2018, p. 245) the authors sought to develop a series of Fashion Artwork to explore how Body Mapping and the phenomena of Enclothed Cognition be brought together for the formulation of an Art Therapy method for mediation, introspection and reinvention.

Working with minorities and less privileged members of the community, the authors actively involved these various stakeholders using a sensitive, comprehensive co-design research process, to create empathetic embodiments of the participants dressed in tangible yet abstract manifestations of their emotions and memories. With these outcomes, the authors hope to draw attention to salient issues of inclusivity, social invisibility, personal agency and mental health, and to spur dialogue amongst fellow artists, the community and minorities.

Moreover, by actively embracing and experimenting with advanced digital technologies in these artworks, the authors hoped to conceptualize novel art-making and fashion design processes with an emphasis for democratisation. By simultaneously preserving the tangible human aspects of art and fashion, the authors

can push the boundaries of physical materiality, transference and countertransference in parallel with the modernisation of creative technologies.

PROCESS & METHOD

Overview

This project relies on the supposition of Enclothed Cognition, that Dress, being an extension of a person's identity, exhibits systematic influence on the wearer's psychological processes. In this section, the authors will elaborate on the five distinct phases of executing this project, from initial laying of groundwork to the exhibition outcomes held at the venue, while simultaneously highlighting how the creative outcomes affected the participants positively through the authentic representation of their individual narratives.

The outcomes showcased for the exhibition were a series art prints of digital dresses worn by hyper-realistic human avatars, representations of the participants engaged by the authors. The creation process began with participant interviews and analysing of 'objects of meaning', artefacts with sentimental values brought in by participants. At the same time, participant likenesses were captured through photogrammetry process for generation of their unique avatars.

Subsequently, the authors guided the participants through co-design sessions, translating participant sketches, artefacts and insights into computational design outcomes, digital assets used to cloth their avatars. The term 'skins' was used to describe these digital assets, recalling how image maps are used to detail 3D models in the digital domain, and referencing the dermis layers of organisms in the biological sense.

Phase 1: Participant Recruitment

To ensure the authenticity of outcomes and that minorities were adequately represented, the participants recruited for this project were curated by the authors via an interview process, as opposed to relying on walk-ins or random encounters. The criteria for shortlisting were to select those who felt their lives changed through the power of fashion, and their candid endorsement of the artistic philosophy. A pool of 10-20 participants was shortlisted. They were young, tech-savvy adults mostly selected from minority communities or chosen from volunteers who are willing to share shared life-changing experiences to raise awareness for social causes or to empower others.



Fig. 1 Second author (left) interviewing participant Joy (right).

One-to-one intimate and substantive recruitment interviews took place at SCAPE, a youth-focused even space in Singapore which also served as the exhibition venue. (Figure 1) As artist-researchers, the authors were responsible for maintaining safe spaces while conducting these sessions, to be aware of issues that could trigger participants and know how to respond appropriately. (Orchard, 2017, p. 7) The authors focused on pivotal moments and strongest memories in the participants' lives, and how these crafted their present-day visual identities. Interview questions might include *'What is your biggest struggle now?'*, *'Was there any incident from your younger days that defined who you are today?'*, *'What is your favourite piece of garment, what memory did it evoke?'*, or *'What is something you wish you could wear but could not in real life?'* This process helped reconnect them with their feelings and memories, addressed any disconnections between mind and body, and reconciled emotions into manifestations that were tangible and relatable. Moreover, one-to-one familiar workshop settings also ensured that the participants felt heard in a safe space.



Fig. 2 Showcasing meaningful objects with participant Rosalina.

Phase 2: 1-1 Story Sharing and Artefact Analysis

Participants were asked to bring along 5 objects of meaning. These memorabilia were used to kickstart conversations, and discussions could include wide ranging themes such as their advocacies, their experience with Enclothed Cognition, past struggles, and future hopes. (Figure 2) After their sharing, participants would be instructed to carry out body mapping and colouring activities to illustrate the emotions they were experiencing. (Figure 3) These visual outcomes were subsequently used for the co-designing process, and all interactions were recorded and transcribed by the authors after each session. Coincidentally, many of these artefacts were wearables, such as belts, pendants, rings, eyewear, and assistive devices.



Fig. 3 Co-design session, body mapping and design sketching with participant Brenda.

Additionally, participants were provided a visual library of textures, colours, forms and patterns in the form of printed cards. With this repository, they shortlisted the aesthetics they feel an affinity for, and they could ways to apply these chosen design elements onto their respective digital dresses / skins. (Figure 4)



Fig. 4 Participant Bryan choosing from visual library.

Phase 3: Avatar Creation and Co-Design Process

Some of the participants' narratives might be intimate and the act of sharing these could be confrontational. Thus, using digital avatars of themselves established an externality to the embodied experience, which might have helped reduce the level of confrontation in sharing, in contrast with other mediums that were more intrusive such as photography or video. A photogrammetry process was used to generate these hyper-realistic avatars, using still frames of videos which captured the participants' facial areas. Participants were instructed to remain as still as possible while the videos were recorded to ensure maximum possible fidelity for the generated three-dimensional assets. (Figure 5)

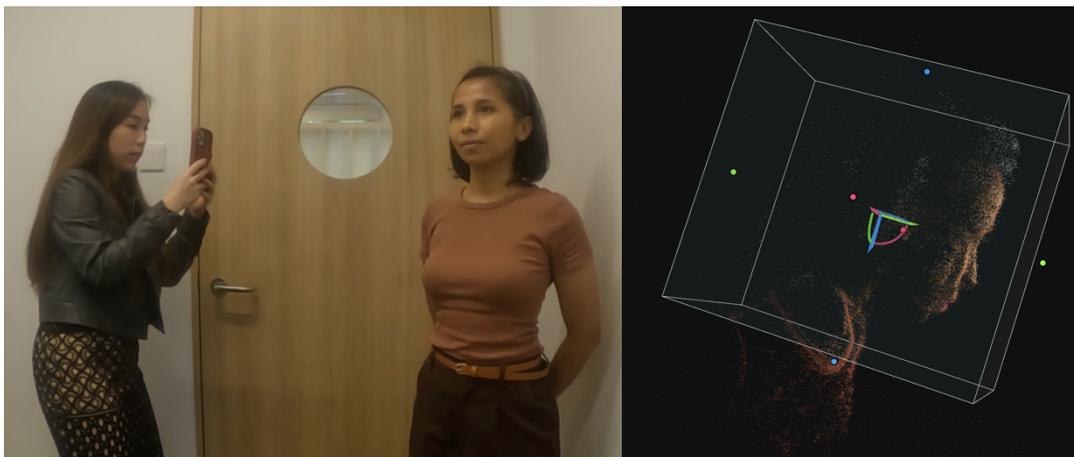


Fig. 5 Left: Photogrammetry capture process of participant Rosalina's facial features. Right: Captured digital point cloud of 3D scan.

The outcomes were highly detailed, three-dimensional meshes, representations of the participants' facial likenesses which the authors assembled onto pre-set digital bodies.

Participants were provided a mirror and were requested to personalize and finetune their avatar in the software environment under the authors' guidance. Not only were they able to tweak the physical features of the avatar, but participants were also able to customise textures of the skin, digital makeup as well as other facial embellishments such as eyelashes, brows, and hair. (Figure 6) This personalisation process helped inculcate an emotive connection between the participants to their respective digital likenesses. Furthermore, they were given the leeway to exaggerate their alterations past the point of realism into the realm of the dramatic. As the variety of body types on the avatar creation platform are constrained to a few standard templates, it did not unpleasantly affect participants with body dysmorphia.



Fig. 6 Screenshot of customisation process for participant Brenda's avatar.

Once the avatars have been customised to the participants' satisfaction, they will serve as digital mannequins on which unique skins embodying the participants' present needs, future hopes and past experiences could begin to be constructed. Even though the authors do not require participants to have expertise in art and drawing, they were encouraged to express their ideas in simple doodles on printed dress design templates. The authors would consolidate these sketches, the participants' verbal cues, and the insights gathered from the objects of meaning shared in phase 2 to generate the final designs. (Figure 7) There was a chronological gap between this and the subsequent phase for this design process to occur.

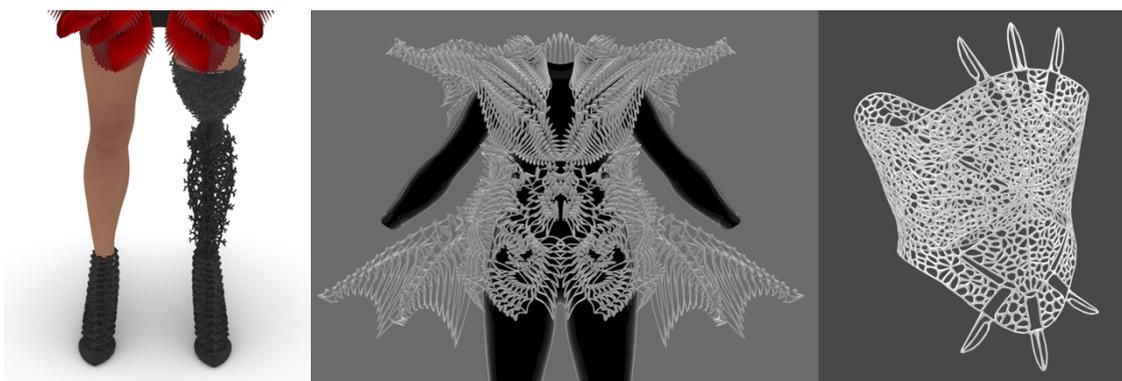


Fig. 7 Work in progress visuals for avatar skin construction.

Lastly, additional short videos of up to a minute each were recorded, where this time participants were instructed to express their personalities (their 'persona') naturally through facial and eye movements. These videos, or facial tracings, were utilised as motion capture data to animate the respective avatars of their participants in virtual space, providing an additional level of legitimacy on top of hyper-realistic resemblances.

Phase 4: Design Review

First, participants would proof-read, edit, and approve the transcriptions prepared

from the previous sessions. In contrast to conventional therapy research where patient confidentiality/anonymity is upheld, this project was carried out for public exhibition in mind for community learning and betterment. Thus, it was important to give participants the latitude to redact any sections of their narrative they felt necessary.

Second, the authors would present to the participant their avatar dressed in the interpreted fashion skin as a completed three-dimensional assemblage, animated with their own motion capture data. Participant comments and proposed changes will be acknowledged and acted upon to refine their designs before exhibition.

Phase 5: Exhibition Experience Design

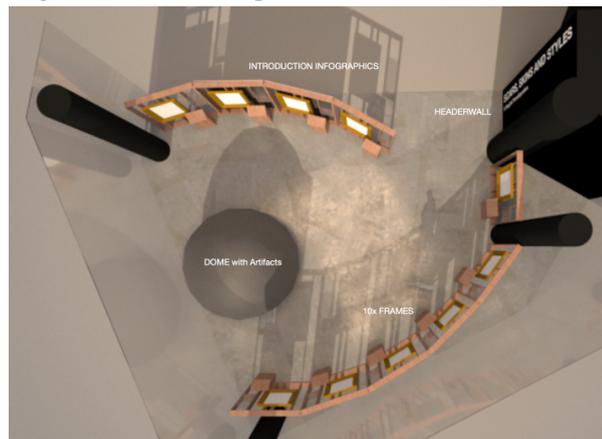


Fig. 8 Digital render of exhibition hall layout.

To present the myriad aspects of the work to visitors from the public, it is crucial for the authors to design a holistic viewing experience for the audience, with all exhibited elements of each participant accessible from their respective viewing spots. (Figure 8) Thus, carpenters were engaged to construct custom wooden display shelves, one for each participant, which were distributed in two board arcs around the exhibition space, with content facing inwards. (Figure 9) The elements on each shelf comprised of a large format colour print of the avatar dressed in the custom skin, a sealed, clear acrylic cabinet holding the participants' objects of meaning, a sloped bookrest holding the booklet filled with participant narratives and a QR code linking audiences to an online copy of the document.



Fig. 9 The two rows of exhibition shelves. At SCAPE Singapore.

The main focal point was the large format colour print showcasing the dressed avatar in full textures and detail, kept in gold-painted wooden frames. (Figure 10, left) Each avatar was characteristically posed with matching facial expressions to convey as much as possible the desired portrayal of the participants' personalities. The avatar was positioned in a virtual, empty setting tinted with a unique hue to differentiate itself from the rest. The elaborate, baroque picture frames were meant to elevate the avatars through their regal bearing, for audiences to perceive them as societally significant regardless of the participants' social standing in real life. Additionally, the authors prepared a hidden functionality that revealed itself through progressive disclosure: audiences could use Artivive, an augmented reality mobile application to view a 360° turntable animation of each avatar on their mobile devices, some which include additional animations such as flowing, draping fabrics, just by pointing their device cameras on the printed portraits.

To provide a direct, visual link to the inspirations of each designed skin, all participants' objects of meaning were stored in an acrylic cabinet beside the main portrait for full visibility. Supplementary captioned photos and printouts of news articles were laid out on the far wall of the cabinet as well.



Fig. 10 Left: Overview of participant Vivian's display shelf. Right: Close up of her cabinet with meaningful objects.

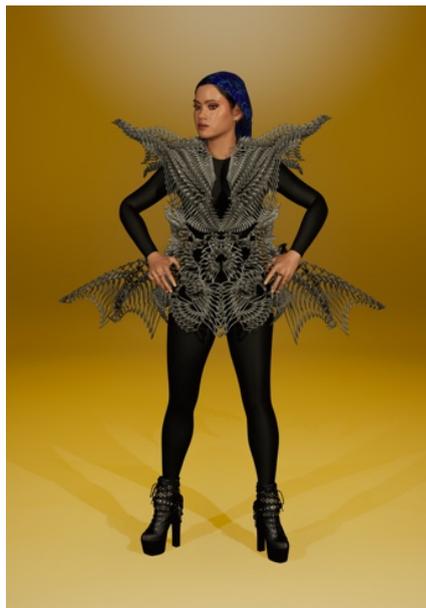
Below each display cabinet was the participant's narrative booklet containing approved excerpts of their transcripts, written descriptions of their objects of meaning, working sketches of their skin designs, and the write-up of their creative concepts. The end of each booklet also contained blank pages for visitors to pen their thoughts and messages of encouragement for the participants.

All these aspects of the exhibits played their respective roles to present a holistic manifestation of emotional experiences as tangible dress concepts, harnessing

Enclothed Cognition for participant introspection and reinvention in the digital realm. They welcome viewers to unpeel layers of identities, some of which might resemble audiences' own experiences. Audiences might find poetry and intimacy in relatable struggles and dreams while reading the interview transcripts. (Figure 10, right)

OUTCOMES

In this section the authors will share on each one of the 10 participants with a character quote, a summary of their narratives, and a brief comment on the design outcome.



Bat, mid-20s (They/ Their)

“I want to be a safe space for anyone who feels alone in this world.”

Non-Binary Hijabi Cosplayer, Arts Management diploma student Object(s) of
Meaning: photos of vampire cosplay, head covering, photo of grandmother

Bat was given a different name at birth. To sound more masculine, they changed their name to ‘Bat’ instead. Having battled gender dysmorphia and depression since childhood, they are not unfamiliar with suicidal tendencies. Today, they fight to overcome Gender Dysmorphia and Depression. Furthermore, they are passionate about social work and helping youths at risk. This dress design uses a skeletal bat wing as a design motif, to represent a memento mori. This motif has been replicated and morphed in 3D to construct an androgynous armoured covering, paying tribute to their passion for fantasy cosplay.



Anise, early 30s (She/Her)

“ ”

Artist, Composer

Object(s) of Meaning: scoliosis brace, musical bell, sea urchin shell, silkscreen mesh of her own illustrations

Anise is no stranger to abnormal growths and cysts, having to remove several from her body since young. She is fascinated by how her idiopathic illnesses manifested, which prompted her investigation into Private vs. Public languages. The communication of pain and isolation, the connection between individuals through the embodied experience, are major themes of her artistic and musical practice. A curious and keen observer of the human condition, identity, emotionality and feminism, she has composed works to question the status quo and highlight issues faced by people in her community. Embracing multiplicity in her own ways, she sees her deviations from the norm necessary for survival, though they might be construed as rebelliousness.



Brenda, late 20s (She/Her)

“Live the let-go life.”

HR Worker, Student, Advocate for body positivity
and better familial communication

Object(s) of Meaning: grandmother's piggy bank, bubble wrappings, photo of
participant with grandmother, grandfather's ring, counterfeit shoes

Brenda’s main influence was her grandmother who brought her up when her parents were busy with work. Thus, she was devastated when her grandmother passed after a lymphoma relapse. Her parents are distant, but Brenda is building bridges to them by actively managing guilt and building self-awareness. Sharing her little victories and reflections on social media helps promote virtues of forgiveness and self-acceptance. This dress design is inspired by the piggy banks her grandmother collected, and other nostalgic objects that documented different phases of her life. She envisioned her costumed self a superhero who spreads joy wherever she goes.



Bryan, mid-20s (He/Him)

“Always strive and prosper, never give up.”

Vegetable Seller, Fashion Model

Object(s) of Meaning: metal chains, vintage cars, intangible organic growths found on vegetables, YSL suit

Bryan is a study of contrasts. His tattooed exterior belies his warm, down to earth personality. Selling vegetables in his family business, he is also a fashion model dreaming of walking in runway shows for brands such as Saint Laurent in Europe. He values hard work and independence, and explored many jobs to gain precious life experiences. He also travels widely to sate his curiosity. His tattoos documented his many adventures and also serve as a way of confronting his fears (such as arachnophobia). Similarly, this dress design aims to document his past fears, his present life and his dreams for the future.



Joanna, early 30s (She/Her)
“It ain’t slow if it’s a flow”

Ex almost-Lawyer, currently a Jewellery Design Student

Object(s) of Meaning: phoenix pendant, Chinese sword, photos of starfields

Joanna yearned to walk down many paths: Acting, Musical Theatre, Fashion, Jewellery Design, and martial arts. However, parental pressure constrained her to study Law, and she struggled for years finding and accepting jobs in the legal profession. Eventually, over the objections of her family, she quitted the Bar. Today, she is on a journey of self-actualisation to discover and accept herself. She works to pursue her dream of starting her own jewellery business while engaging with her other interests. Her dress design described her struggles going against the flow, and fighting her fears of being judged and lack of independence.



Joy Rouge, mid-30s (He/ They)
“I almost died, therefore I am.”

Playwright, Poet, Customer Service Provider,
Survivor of serious bus collision in July 2021

Object(s) of Meaning: poetry works, sugilite stone, prada eyewear, photos of
participant and mother

Joy Rouge is an emotional, artistic soul who loves to create. Experiencing homelessness since young meant that he had to abandon countless works of art and poetry due to lack of space where he could belong. His life was plagued with the trauma of violence and near-death experiences. There was constant conflict between his parents, and even a time when his father held him down with a knife to his neck. The bus flipping over in 2021 with him and his mother inside, was a heavy mental and emotional blow, rendering him artistically unproductive after the accident. His look is filled with his past poetry work crumpled and scattered to form a chaotic silhouette, with a metallic corset close to his skin characterized with blade motifs pointing in all directions.



Opera Tang, late 20s (She/They)

“All queer people have a superpower - our queerness.”

Drag Performer, featured in the documentary film ‘Baby Queen’ in 2022

Object(s) of Meaning: Pink Dot plushie, photo of grandmother attending Pink Dot, promo material for 1st drag performance at RIOT!, poster for first documentary film ‘Baby Queen’

Born through fortuity and circumstance, Opera stands on the shoulders of drag queens from before. Joining the supportive drag community, she acknowledges her privilege coming from the majority race, a stable family background and relative lack of discrimination. ‘Taobao made me Opera Tang.’ she said, with her looks inspired by Chinese Opera costumes found online. They inspired her voice and vision. Today, she draws inspiration from cultural iconography to relate to local audiences and reconnect with her roots. Opera’s dress design reinterprets “The Legend of White Snake”, and highlights struggles against society’s status quo and patriarchy using abstract serpentine motifs.



Rosalina, early 30s (She/ Her)
“I am Beauty in Imperfection.”

Amputee Model, Inclusivity Ambassador,
Survivor of Medical Malpractice

Object(s) of Meaning: prosthetic leg, rose, bandages, full length green skirt

A botched medical procedure caused Rosalina’s left leg to be amputated. Growing up outgoing and cheerful, the loss of a limb badly affected her psyche. Rosalina received insensitive comments and finger-pointing in public, and wore long pants to hide her condition. Furthermore, she avoids high heels due to the cost of modular, arched heel prosthesis. Nevertheless, she regained her rebelliousness and fervour, comparing herself to a rose: sweet, beautiful but thorny. She uses this energy to help her live her fullest life. Composed of hundreds of rolled up luxurious red floral petals that also bear resemblance to bandages, this design demonstrates Rosalina’s rich zest for life. To contrast, her prosthesis is a futuristic, thorn-filled latticework, while both feet are clad in sleek high heels to rebuke the limitations of her reality.



Wheelsmith, late 20s (He/Him)

“Dare to dream. Devote to design. Deliver to the Death.”

Rapper, Beatboxer, Team SG Wheelchair Rugby Player

Diagnosed with Muscular Dystrophy at age 4

Object(s) of Meaning: wheelchair rugby gloves, photos of legs taken on Fuji camera, mechanical watch, ZOIDS toy, photo of performance with T.H.E Dance Company

Wheelsmith shared how switching his standard wheelchair into a larger, reinforced version for wheelchair rugby lifts his spirits and reinvigorates his body. He enjoys modifications to improve user-friendliness, i.e. removing wheelchair handles to demonstrate his independence. He highlighted how the fashion market has not sufficiently catered to the disabled. He liked Zoids, model kits assembled into mechanized creatures that move and animate using internal motors, and compared their philosophy with how he existed interdependently with his wheelchair as one entity. This inspired the design of a reconfigurable, armoured wheelchair with mechanized detailing, with an aura of enhanced mobility and strength.



Vivian, early 40s (She/ Her)
“If I can do it, so can You!”

Entrepreneur, Author, Avid Barbie Collector Diagnosed with
spinal muscular atrophy (SMA) Type 2 at age 2

Object(s) of Meaning: Barbie dolls, pink princess dresses, high heels, hospital bed

Vivian refuses to let her physical limitations constrain her drive and curiosity. Though paralyzed from neck down and bedridden for decades, she could use technologies such as eye-tracking controls to run an e-business, authored a book and learnt various software to create digital art. An avid Barbie collector, she displays more than 300 of them in her house, and even a wheelchair-using Barbie doll. To channel her positivity and bright outlook, Vivian is presented as a dolled-up version of herself, dressed in a rich floral gown and laid on a custom home care bed built for a princess, which are coloured in her favourite shades of pinks and purples.

The process of designing Vivian's look begun with giving her lessons on AI generative tools. She eventually learnt how to create her own images using eye movement tracking technologies and translation apps to issue written commands. Using these images as inspiration, the authors worked closely with Vivian throughout the whole designing process using 3D scanning and 3D printing technologies to bring the doll to fruition. Her project effectively examined life-changing experiences through the lenses of Digital Technologies and Co-Designing.

FOLLOW UP EVENTS

To complement the core exhibition experience, an Artist's Talk and Artist's Panel were conducted at the venue. The Panel involved the second author as the Representing

Artist, an officer of the National Arts Council serving as a moderator, a certified art therapist, and a fellow artist who specialised in masking painting for the elderly. (Figure 11) Through their dialogue especially coming from the specialists in this domain, there was consensus that the processes and methods applied for these artworks showed promise for future development and expansion. The Artist Talk served slightly different objectives, with the Representing Artist inviting one of the participants Joy Rouge to express themselves through the reading of their own poetry, and screening a specially made music video showcasing Joy's animated avatar with one of their published songs as a backing track. (Figure 12)



Fig. 11 Panelists at the Artist's Panel. Left to Right: Moderator, Traditional Art Therapy Practitioner, Representing Artist / co-author, Mask Painting Workshop Facilitator.



Fig. 12 Artist's Talk with participant Joy (green dress) and Representing Artist (at table).

Both events were welcome for public participation, allowing audiences to interact and ask questions and opening the space for diversity of opinion. The exhibition itself gave them chances to partake in its philosophy of inclusivity, respect and compassion.

Audiences also had the opportunity to pen supportive, encouraging messages on the visitor pages of the participants' booklets, creating further opportunities for mutual healing and social advocacy. These booklets with the filled in visitor pages have been distributed to every participant as keepsakes after the exhibition, serving as tangible reminders espousing healing and community support, which are crucial instruments for breaking down walls of familial, societal, and institutional resistance. (Figure 13)

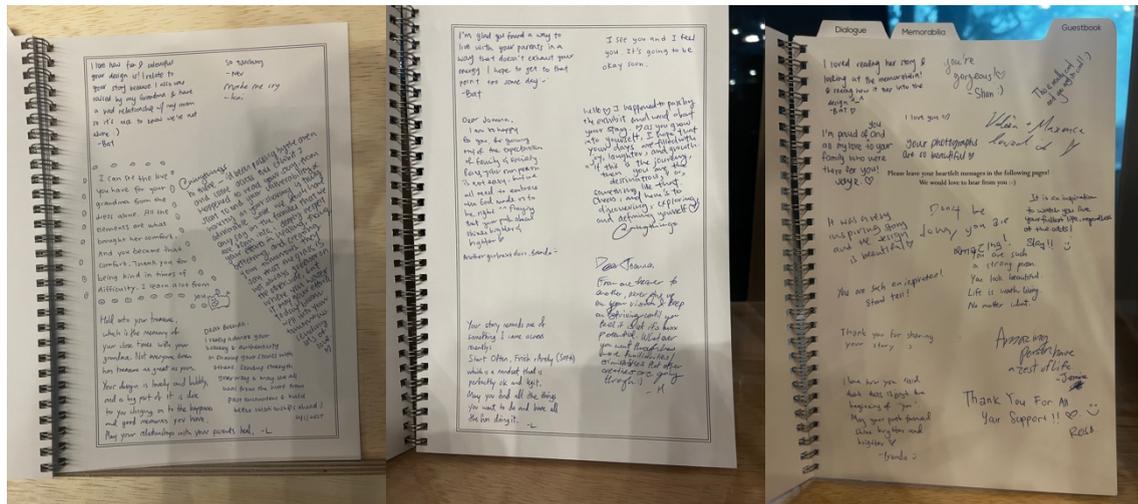


Fig. 13: Messages of support found within participants' booklets.

Reactions of the participants were positive. Their feedback highlighted that the design and artmaking process benefited them, whether be it through inculcating healthy self-awareness or giving them positive spiritual experiences. Some members of their social circles also reached out to provide healing after learning of their personal struggles through the exhibition.

The intent of this project is to explore novel digital fashion making methods while nurturing and building up minority members of the community. Thus, although the outcomes of the project were not designed to be quantitatively measurable, by evaluating the written and spoken feedback from the participants and exhibition audience members, the authors were able to gain insights to the effectiveness and impact of the artwork. Through triangulating these various reflections, the authors conclude that “Scars, Skins and Styles: Phygital Transfigurations” had been an invaluable learning experience for themselves, and a worthwhile experimental process to submit to the body of knowledge for Art Therapy methodology development.

DISCUSSION AND FUTURE WORK

Even though the digital landscape has been rapidly changing the past few years, there is a surprising absence of a fashion tech community in many Asian cities. The authors propose to set precedents by showing digital fashion as a proper, recognized art form that is multidisciplinary, collaborative in nature and culturally significant. It is

imperative that fashion practitioners practice cross-disciplinarity, to hold multiple identities such as a toolmaker, trendsetter, educator, and game-changer. Moreover, more chances to work closely with the community, facilitated by institutions with ample, accessible space for showcase and interaction, would help place a spotlight on previous unseen practices, different ways of thinking, working, making, interpretation and even preservation.



Fig. 14 Sample scenes from music video featuring Joy's avatar.

The authors hoped through such projects to preserve the tangible, physical human aspect of art and fashion, as well as allowing design-making to be democratised. They believe boundaries of physical materiality, transference and countertransference can be pushed, and go hand in hand with the advancement of digital technologies. By allowing more people to participate, it would be easier to customise and fabricate creative and artistic physical products and experiences for underrepresented minorities such as otherly-abled persons. There is much potential for creating and adapting avatars such as those used in this project for other artistic and fashion work as well as applications for healing and therapy. As shown in participant Joy's example of using their avatar to complement their music video, (Figure 14) it is possible to push the boundaries on use of AI generative models in conjunction with these designed avatars and skins, for their owners to express themselves richly and creatively.

Lastly, there is a need to revolutionise how fashion is presented today. Way too much waste is produced due to imperfect manufacturing processes and careless design conventions. By nurturing critical thought concerning artistic, cultural and environmental practices, the authors aim to promote sustainable fashion in various forms. Furthermore, there is need to give voices to alternate forms of beauty. Body positivity is important, and it is a movement that exists for people who do not have the luxury of being body neutral. The notion of dress needs to go beyond aesthetics and trends to celebrate the intersection of all identities. By nurturing voices of the marginalised, the authors hoped to weave them into a fabric of strength and compassion, and create positive changes in the face of familial, societal, and

institutional resistance.

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