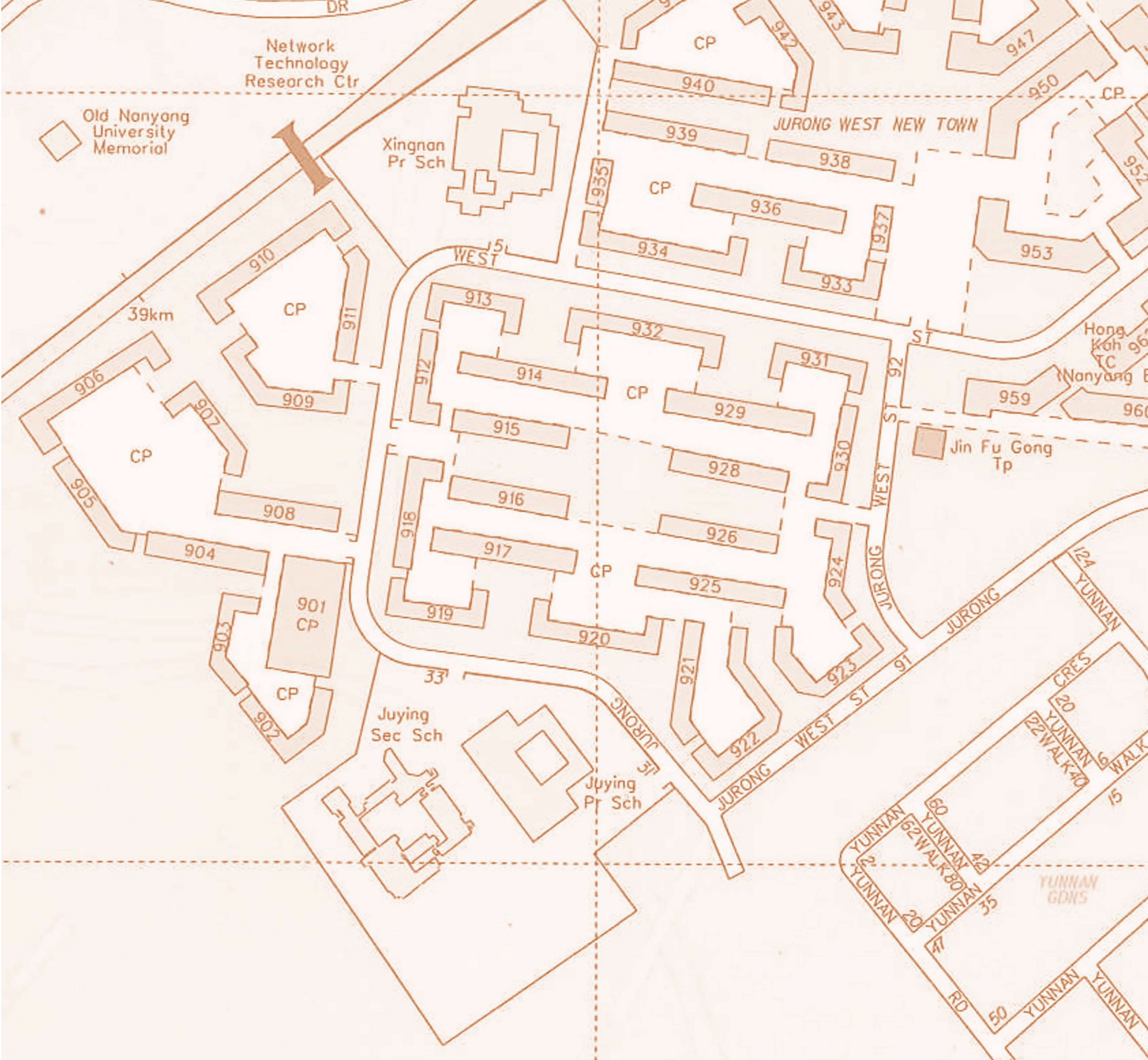

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Language and Communication Centre
School of Humanities

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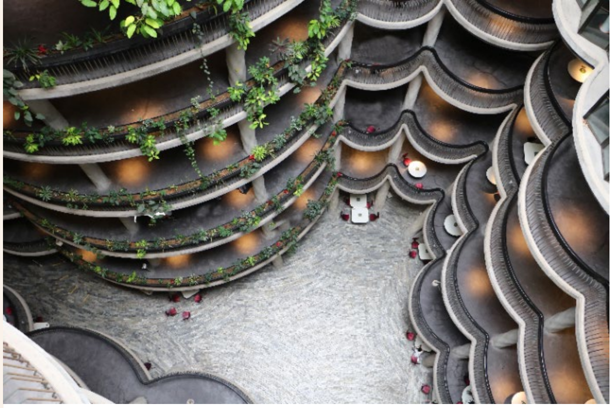

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· INTRODUCTION ·

Welcome to *Pioneer Road: Journal of Undergraduate Research*, Volume 3! We are delighted to share this collection of excellent essays written by students of the Language and Communication Centre (LCC), Nanyang Technological University (NTU), Singapore, during AY2022-2023.

Beginning the collection is op-ed essays from CC0001: Inquiry and Communication in an Interdisciplinary World, a core course at NTU taken by all Year 1 students. The essays range on topics based on students' observations of Singapore, from authenticity of heritage sites to skateboarding subcultures to finding stillness in this fast-paced world. Additional perspectives are woven into the essays, deepening the students' line of inquiry which is ultimately resolved at the end of the essay or deliberately left open for the reader to ponder on. The writings in this collection have finesse and acuteness that make this difficult process seem effortless.

Also representing work from the LCC is research papers by Year 2 social science students. In the course, students design and carry out a research study through surveys, interviews, ethnographic observations, and/or textual analysis. This collection showcases research on perceptions of sustainability of fast fashion, effects of incentives on response bias of student feedback, and other interesting topics.

Special to this volume is a set of four proposals written for a 2023 NTU Undergraduate Interdisciplinary Challenge for Year 1 and Year 2 students. Led by Dr. Alvin Leong Ping and Dr. Tan Mia Huan, the teams worked together to design innovative solutions for solving real world problems, such as time poverty and child neglect.

Pioneer Road metaphorically represents this journal's progressive spirit, but the cover now also cartographically shows that Pioneer Road exists as a real place. Designed by student Tan Yi-Xian Benjamin, the street map is of Jurong, the community next to the university. Running through Jurong, Pioneer Road is a main conduit to the university, bringing students, faculty, and staff together. This journal also brings the NTU community together through the writings of the student authors.

I also would like to give a special thanks to Ong Ye Xun, Adrian, the first student editorial assistant. His efficient communication, attention to detail, and smart organization have been invaluable to the production of *Pioneer Road.*

We hope you enjoy these essays!

Keri Matwick, Editor in Chief

· Visit our Pioneer Road website ·

https://blogs.ntu.edu.sg/pioneerroad/

· CC0001 ·

Inquiry and Communication in an Interdisciplinary World

CC0001

Fluidity of the Self

· Ou Yong Weiyi Emily ·

Another eager face peeked round the corner of the counter, greeting me with the question I'd been asked five times in the past ten minutes: "What time will you guys be open?" My co-worker flashed me a panicked glance as I coolly answered, silently vilifying them for their ineptitude in searching it up online. As soon as the queue poles were drawn back, we were bombarded with a barrage of coffee orders, the first "slam" of the day. All right, it's a Saturday after all, I muttered to myself, pulling yet another espresso shot. The morning wore on, and soon the minimalist cafe marked by oakwood tables was filled with customers from all walks of life. Students pulled out laptops from their bulging backpacks, young families soothed crying toddlers in strollers, and a handful of friends chatted away amicably. It was an especially busy weekend, with queues snaking out of the cafe and the buzz of conversation drowning out the pop music playing softly in the background. The mechanical grating of the coffee bean grinder, the hiss of the steam wand, and the clattering of saucers in the preparation of drinks became increasingly frantic with no end in sight. Order dockets were piling up, and disgruntled customers in line tapped their feet in exasperation, an entitled few directly approaching the busy baristas in hopes of expediting their drinks.

"I want to go home," lamented my manager for the third time that hectic morning. In spite of everything, we put on strained smiles, accommodating customers as patiently as we could manage, and making sure they left satisfied at the end of their visit.

In the domain of customer service, customer satisfaction is paramount in ensuring repeat visits. It is evident that the majority of us are often obligated to enact a role that masks our true identity, especially in social settings where we have identifiable, concrete goals to achieve. Trained staff hence act accordingly with this objective in mind and are ever concerned with how they are coming across to customers, who expect them to be pliant in responding to requests, courteous in every interaction, and attentive to their needs. Working as a barista in Singapore, I have found myself adjusting my behavior depending on who I interact with and the situations I find myself in. With older, less tech-savvy patrons, I speak slower, and louder, and am generally more patient. Attending to customers around my age, I tend to make small talk and give recommendations from the menu. We are constantly manipulating and controlling the way we present ourselves to others, in a deliberate, strategic construction of social interaction. Yet, we are still not totally in control—we in some symbiotic relationships are also manipulated and controlled by contexts. This leads me to ponder whether a true self—behind the numerous masks, illusions, and facades we hide behind in our everyday interpersonal communication—exists, or if our identity is simply made up of the parts we play.

Erving Goffman (1956) makes his case for the latter in his book, *The Presentation of Self in Everyday Life*. Goffman notably uses theater imagery to illustrate his theory that there is no identifiable self behind the roles that we play. He likens social interaction in daily life to staged plays, with the individual characterized as the performer and those observing as the audience (p.7). Our strained efforts in oscillating in between these various performances are evident "behind many masks and many characters, [where] each performer tends to wear a single look, a naked unsocialized look, a look of concentration, a look of one who is privately engaged in a difficult, treacherous task" (p.161). Being conscious of being watched, we meticulously study the expectations of various roles as a form of preparation in the "backstage," where we can drop the act and catch a breath (p.79).

Goffman's dramaturgical perspective and theory of impression management claim that our self-image is molded according to the social interactions we engage in (p.19). Without the presence of the audience and the pressure of putting up a front, we discard all illusions. Perhaps the backstage is where we are perceived to be closest to our core selves because it is where the innermost workings are revealed (p.70). The puppeteer is rather comparable to a blank slate. But are we cognizant of our true selves, let alone truthful in our representation?

In the journal article 'My True Self is Better Than Yours,' Yiyue Zhang and Mark Alicke (2020) of Ohio University assert that "people are necessarily their true selves because what else would they be?" (p.216). The authors claim we view our true selves as morally good, bringing to mind a concept known as the self-serving bias. We are inclined, as Zhang and Alicke (2020) described to attribute our successes to internal factors, and our positive traits as part of our natural character, or "true-self-characteristic" (p.231). This can distort our perceptions as we take excessive credit for what we excel at and deny responsibility for our failings, in the belief of a morally superior core identity (p.233). They conclude that we use this belief to excuse morally questionable actions that do not live up to our virtuous inner self and substitute generous explanations for our shortcomings (p.235).

This can set a dangerous precedent when we simply assume that we are naturally virtuous without putting in the work to act as such. When we do not feel motivated to behave in a righteous manner, we occasionally exploit this belief to excuse bad behavior and chalk it up to a temporary lapse in our otherwise noble character. Perhaps we are better defined by the actual self and the true self is merely a lofty conception we wish to embody. The corollary is that rather than us having inherently commendable qualities, behaving ethically becomes attributed to one of the performances we put on, as Goffman describes. Morality becomes one of the many masks we juggle, instead of the guiding principle at the heart of everything we do.

The fact that the word 'person', drawn from the Latin word 'persona,' originally referred to the mask donned by an actor is probably no mere coincidence. The reality is that no one ceases from play-acting and that it is in these roles that we form conceptions of ourselves, or rather the conceptions we endeavor to achieve. I believe that the social roles we perform are not entirely new, studied personas but an extension of the beliefs and morals we hold deep down. With these new insights, it seems more productive to explore the implications of believing in a true self, rather than the practical, almost scientific examination of the existence of one. While the factual existence of a true self may be debated over, it certainly can't hurt to believe in a true self if it fuels one to live a meaningful life aligned with one's values. In fact, nurturing this 'hypothetical true self' could positively affect future versions of personae taken or even manifest as a better 'actual' self. In this sense, the true self is a hypothetical rather than an empirical discovery. Although the idea is somewhat nebulous, it can provide individuals with a firm basis for their self-worth and potentially promote self-fulfilling prophecies in the long run. Essentially, it is what we make of our true selves that translates to who we present to the world as our actual selves and how we know each other.

Acknowledgements

I would like to extend my gratitude to my professor, Dr. Angela Frattarola, for her continuous support and guidance in the writing of this op-ed, as well as her kind recommendation for publication. I would also like to thank the reviewers for their percipient comments, which provoked further reflection and refinement. Lastly, thank you to PPP Coffee for providing me with the experience which inspired this essay.

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Pioneer Road (2023): 11-16

CC0001

Escaping Yet Facing Reality: Consumption and Creation

• Wu Yansong •

Resurgence, of the mind
Resurgence, of a whole culture
Think it's a good time

Think of the gate
Think of my maze
Gatekeeper waits
Shift-shifting weight
Sore heels and blunt thoughts
Cascading through the knolls
Hills are our only walls
So I see right through them

Step up the gravel
Eyes piercing through the mould
In a flash
Pine trees will shoot out the roadside and peace is restored once more
No questions
No questions
No questions
Live on live on live on

Take a bus ride
Pretend the sky bronze tinted gize
Department stores, flags and flags all glor
lously spreading the cheer of the
Truth is my world's a theme park floating and circling round all my facets
I see the thunder and lightning unbridled, callously shining. I don't need gadgets.

Think of the gate
Think of my maze
Gatekeeper waits
Shift-shifting weight
Sore heels and blunt thoughts
Cascading through the knolls
Hills are our only walls
So I see right through them

Figure 1. Gate, written on 19 July 2021

Notes

24 October 2020 at 1:39 PM

St. Kooliva

The reaping of what we have sowed, in overcrowded grey soil
With concrete laid on the tops
And no one to come to see us farmers as ancient history
We are monuments that have time machines in our minds

At the terrace, I fall all the way through those 1800 cracks that scientists have paved
Onto the synthetic rubber with flag poles erected to establish rote devotion
Rote - en route to my failures as the stresses saturated, and denature my bright orange heart

Denature my bright orange heart

In st. Kooliva, our minds are sparkled and struck together
But we take the pause, and see the sunset above
In st. Kooliva, life doesn't have to be so bleak
I have constructed a personal academia redemption

Redemption

Plant life redemption

Music club redemption

In st. Kooliva, our houses made out of modernist steel, we burst through nights away, and drink and hydrate into lights of day
We'll marvel at sunsets, and praise the youth the night exhibits
We can surf through paperscapes, and equip skills at our fingertips
We'll write astronomical essays
Redemption
We'll craft indispensable theses
Redemption
We'll brew delectable home-made coffee
Redemption
We'll strut all the way down our last four years of excellence

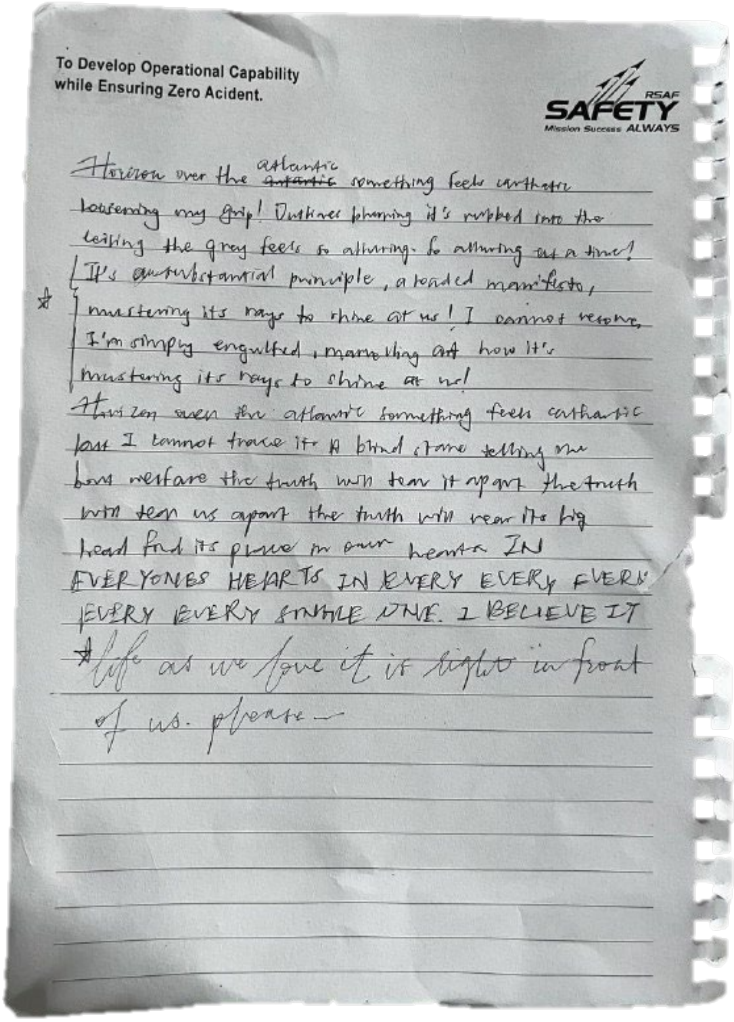
Redemption

Plant life redemption

Music club redemption

Academia in st. Kooliva
Academia, such a frail prophecy
But Academia, I will fulfil thee
I taught myself. It is my last chance
In st. Kooliva

Figure 2. *St. Kooliva*, written on 24 October 2020.



To Develop Operational Capability
while Ensuring Zero Acident.

RSAF SAFETY
Mission Success ALWAYS

Horizon over the ~~atlantic~~ atlantic something feels cathartic
loosening my grip! Darkness blurring it's rubbed into the
ceiling the grey feels so alluring. so alluring at a time!
It's a substantial principle, a loaded manifesto,
☆ mustering its rays to shine at us! I cannot resolve,
I'm simply engulfed, marvelling at how it's
mustering its rays to shine at us!
Horizon over the atlantic something feels cathartic
but I cannot trace it. A blind stone telling me
bow warfare the truth will tear it apart the truth
will tear us apart the truth will rear its big
head find its place in our hearts IN
EVERYONES HEARTS IN EVERY EVERY EVERY
EVERY EVERY SINGLE ONE. I BELIEVE IT
☆ life as we love it is right in front
of us. please –

Figure 3. Untitled, written in November 2021 in camp during National Service.

As I sieve through self-written songs of the past, curious nostalgia washes over me. This process gave rise to fresh insights into my songs. The most striking features of my songs lie in their form. Most apparent on physical mediums, I take creative liberties to undermine traditional song structures. This subversion is apparent in Untitled (Figure 3), with the untypical inclusion of symbols, and variation in handwriting and font size. Additionally, the songs are largely incomplete. Paying attention to their content, I notice an exclusive common theme of anguish and imagined resolution. No song is without conflict– even the most positive song, St. Kooliva (Figure 2), mentions being "en route to my failures," reflecting an undesirable prophecy of unmitigated agony faced in Junior College. However, self-granted celestial power often dispels prophecies like this, as depicted in Gate (Figure 1), in which my "eyes pierce through the mold," causing "[p]ine trees [to] shoot out the roadside."

Based on these observations, I am enlightened about my motivation to create songs. Pertaining to form, my tendency to disobey conventional song structures points towards my urge to accurately capture raw emotions. By straying away from fitting my songs into familiar formulas, I avoid diluting their meaning. Moreover, the incompletion of my writing implies my fulfilment of catharsis which terminates the song writing process and elucidates my disregard for assigning musical refrains. The irregular form hence suggests the prioritization of expressing emotions as my primary goal of song writing.

Analysis of the content reveals the common emotions expressed in my songs. The recurrence of somber subject matters suggests that the song writing process begins with the need to resolve negative feelings.

Analysis of the content reveals the common emotions expressed in my songs. The recurrence of somber subject matters suggests that the song writing process begins with the need to resolve negative feelings.

As the writer of these songs, I lend credibility to my assertions of the conscious techniques laced within them. I intended to engage in world-building by constructing fantastical worlds through my lyrics. My prior intentions hence lead me to believe that the resolution of negativity is predicated on attempts at world-building and manipulation. I conflate imaginary and real elements and accord power to the narrator to ameliorate tensions reflected within those worlds. Therefore, the worlds depicted become proxies for emotional therapy. I walk the line between escaping into fantastical environments while tackling reality portrayed in my songs.

The amalgamation of escapism and facing reality incites intrigue within me as those two concepts are often perceived as antithetical to each other. However, my song writing is proof that their coexistence is feasible and potentially useful for coping with negative emotions. As such, it begs the question: How should realism be incorporated into escapism to ensure favorability in emotional therapy?

In Samantha Constantine's thesis (2020), she deciphers the success of combining realism and escapism through the exemplary models of Disney and Nintendo. She proposes that their interaction with common post-war ideologies led to their immense cultural impact in Japan, as they "incorporate the familiar into the magical" by "celebrating hard work, tenacity, perseverance, and kindness as heroic traits" (p.35). In other words, she posits that the shared mindset among Japanese citizens after World War II of desiring “upward mobility” (Constantine, 2020, p.36) is tied to the notion of protagonists overcoming obstacles in every narrative presented by Disney and Nintendo. The companies’ massive successes can hence be attributed to their application of relatable human values to their storytelling. Constantine (2020) further asserts that “consumers, then, rather than dwelling within the war torn past and present, they could follow the examples of Walt Disney and Satoshi Tajiri and take action” (p.47). She contends that a significant aspect in stirring the minds of consumers is the creators themselves, whose journeys to building such immersive products mirror the odd-defying arcs of the stories presented to consumers.

Through these success models, we can observe that the basis of inspirational fiction is reality itself. Fantastical tales that offer the pleasure of removing oneself from real-world pain require a prior comprehension of reality before prescribing their benefits to the consumer. We might thus conclude that realism precedes escapism. However, the relationship between realism and escapism proves to be even more complex, as factors rooted in realism, such as the backstory of Disney and Nintendo’s founders, occur simultaneously with the experience of escapism.

With Disney and Nintendo’s approach to storytelling theorized as a suitable way for emotional therapy, it is prudent to acknowledge that the commodification of mass media has increased the demand of niche narratives that speak to individual goals and values. Contemporary audiences crave media that showcases alternative protagonists and plots that challenge the conventional mode of storytelling established by Disney and Nintendo. For instance, the popular Netflix drama series, Breaking Bad, features an antihero as the protagonist, who lacks traditionally heroic traits. Other successful shows like Black Mirror illustrate plots without central protagonists while retaining gripping storylines and themes. Consequently, the uniformity of escapist mediums has decreased. Hence, exploration of niche models of escapism would further guide us towards the most desirable way to implement reality into fantasy.

One suitable niche to examine is virtual reality (VR) integrated art therapy, which Liat Shamri Zeevi (2021), in her research article, opines could “treat adolescents suffering from anxiety and social difficulties” (p.1). She explains that “play and creative work in VR appear to be embodiments of symbols in that they use objects to represent perceptions and emotions, and bridge between internal and external worlds.” (p.6) By repackaging real-world elements into a simulation, patients can reconcile the incongruences between themselves and the real world without fear.

Zeevi’s (2021) endorsement of VR in alleviating real-world issues is attributed to VR’s capacity for creativity. The creative role, which the art therapy patient takes up, helps them to specifically represent their struggles and tailor their therapeutic experience in the VR space. Hence, it can be said that realism practiced in effective escapist mediums manifests as one’s activeness in drawing connections between personal reality and fantasy.

Through Zeevi’s article and Constantine’s thesis, we can see that the role of individual creativity rectifies the issue of overgeneralized experiences reaped from consuming escapist media. The ostensible superiority of being a creator of your own escapist experiences over passive consumption explains the success of my song writing in engendering emotional therapy for me, as I had the freedom to insert personal renderings of my struggles. It would thus appear that realism in escapism should be created by each individual.

However, to decide that creation of escapism is definitely better than passive consumption would be to overlook the persistent popularity of escapist media. For instance, Disney's sustained influence on contemporary pop culture is a testament to the timelessness of its fictional narratives. Notwithstanding that cynical outlooks on optimistic fiction exist, it is evident that the simulation of overcoming challenges still inspires and emotionally soothes many people. Mass media's ability to invoke conversations among large quantities of people as they bond over a common narrative enables them to achieve solidarity, which augments emotional therapy. Its prodigious role in fostering shared therapeutic experiences through consumption is irreplicable by creating art. Therefore, passive consumption of escapism is not lesser than creating escapism. It holds its own with its unique, valuable properties of enabling solidarity.

Ultimately, we see two types of escapism, consuming and creating, each distinct in their approach to emotional therapy. Consumption of escapist products entails generalized elements of realism and promotes widespread resonance among people in their incitement to alleviate their pain. On the other hand, creating escapist experiences consists of realist elements specific to the creator, directly responding to their afflictions. Cognizance of both types' unparalleled value to human beings leads to my conclusion that the incorporation of realism into escapism should be determined by the individual. As long as the recipient of escapism draws connections to their reality, it is up to their discretion to incorporate realism through either creative or passive mediums to satisfy their emotional needs.

Within the comforts of my bedroom, a cacophony of ballpoint scratching against paper, a susurrus of uncertain melodic humming and the rhythmic tapping of limbs mimic an earnest escapist orchestra amongst calendars, textbooks and phone notifications from The Straits Times. As reality demands our wholehearted attention, escapism in its changeable forms plays the heroic knight, not for us to hide behind them, but to stand beside them in our combat against life's adversities.

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CC0001

Families That Play Together, Stay Together

· Tan Yan An ·

Figure 1. “Tiong Bahru Train Playground, Tiong Bahru, Singapore”

Figure 2. “Father-daughter playing in the sand, Tiong Bahru, Singapore”

A quaint little playground is nestled among the trees within a park in the Tiong Bahru Heartland. This playground (Figure 1. Tiong Bahru Train Playground, Tiong Bahru, Singapore) holds a place in my heart as my parents used to bring me here when I was a child, during a much simpler time. From afar, I see a train suspended above the ground, with three tumbling cabins, atop a sand bed resembling a white sand moat. Walking closer, with the soft sand under my feet, I could hear excited shouts and footsteps as children clambered about the playground and waved at their parents watching at ground level. Despite the blazing heat, parent and child alike were invested in using the playground to the fullest—a father and daughter combo was constructing a mega fort of sand (Figure 2. Father-daughter playing in the sand, Tiong Bahru, Singapore). The sweat glistened on the dad’s face as he provided bucket of sand after bucket, for his precocious architect to utilize. It contrasted with the sight I saw on the bus ride here, where families mostly sat inanimate and mute on the way to their destination. Some children were entertained by their screens, and their parents likewise were scrolling on their phones. A young boy asked his mother a question, which was met with a nod and a non-committal remark, then, with furrowed brows, he returned to playing his game.

From my observations, compared to when I was growing up, many parents now do not interact as much with their children. I wonder if families nowadays struggle with intimacy. Yet, at the playground, I see the children having fun in the moment, and their parents too joining in the amusement. The physical area of play allowed families to give their absolute attention to one another and enjoy the moment together—moments that parents could argue is limited as children would soon outgrow their current phase of life. This raises the question: To what extent have modern lifestyles influenced young children's bonding with their families?

In the Ted Talk (2021), "How every child can thrive by five," Molly Wright raises the point that babies' brains develop at a tremendous rate from birth to a few months old, until the prime age of five. Wright (2021) also shares how children from birth are primed to learn skills, and playing games together is indispensable to building family relationships and gaining essential life skills. "Peekaboo," for example, is able to build empathy and foster closer connections between the parent or the player and the child, as the latter is able to recognize faces and facial expressions, as well as learn verbal and non-verbal cues.

This brings our attention to how time and interaction are of the essence for families or parents with young children because they want to capitalize on this timing to imbibe good behaviors. In contrast, screen time can be a physical barrier between parents and children—children can feel alienated and estranged especially from a young age, and the parents, none the wiser, might continue to commit this mistake. Moreover, children will be missing out from the benefits of these essential skills, be it communication or memory-related abilities. Therefore, I believe that the present norm of living—entertaining oneself with electronic devices is detrimental to children as compared to the past, when parents and children had fewer distractions and could engage in meaningful conversations.

Building on the idea that children need affection as they develop, in her article, "Why 'Eat With Your Family Day' should be every day," working mother June Yong (2022) emphasizes the need for families to set aside time to foster stronger connections. Mealtime conversations allow families to share and open up about their emotions, and children can hear from their parent's perspectives. She also introduces the term "Workism" coined by Derek Thompson in the Atlantic where work has become the parent's identity, and the perception that working longer is beneficial (Yong 2022, para.1). The line between family and work time has become a blur, especially when we have 24/7 access to our phones, resulting in stressed parents and bewildered children. This is demonstrated in a 2021 survey by Focus on the Family Singapore, where 70% of parents with children between the ages of five and eight reported being too busy to spend quality time with their children. Moreover, less than half felt happy when their child asked for their attention, and a quarter even felt angered or stressed by it. (Yong, 2022).

From these results, I believe that modern working practices and accessibility to our laptops and devices have fractured the relationship between families and young children. Knowing when to stop working can be challenging, especially when work can be brought around, and employees can be contacted at a moment's notice—as long as their phones are around them. Despite their children just naturally craving for care and attention when they have not seen their parents for the entire day, most parents are buried in work and devote less attention to their young children—to the point where they even express frustration to their children. Yet, some parents may not see the issue, whereas the children feel the insidious effects of such acts. Children may grow up feeling isolated from their parents or even develop the mistaken notion that work is a higher priority than family time as they advance into adulthood, perpetuating the cycle of work-driven parents. Thus, modern ways of living have been shown to impair communication between parent and child and hinder familial relationships. However, I argue that this is perhaps less of the parent's fault and more of a larger societal issue that values work.

Wright introduces how babies are primed from birth to absorb information and playing various childhood games can allow them to learn new skills and grow closer as a family while Yong shares from her experience as a working mother about how work has fractured familial relationships but the candid conversations at the dinner-table with her grown-up children allow the family to reclaim their bond. Both argue that screen time is a detriment and an obstacle to family bonding. However, they have overlooked the larger issues of workload and time management that impedes families from fostering tight-knit relationships. Parents have to deliberate between working longer hours in the office or continuing to work in the comfort of home, while children have to tackle rigorous assignments and strenuous co-curricular activities in school. Moreover, there is also a surge in the mindset of equating one's busyness to their productivity. Hence, I believe there is a larger need to address the heavy workloads and the mindset shifts that families can adopt.

How do we tackle this growing issue? I believe it starts with encouraging society to be more receptive towards family and recreation time. In the modern world where many distractions can bombard and detract one from focusing on family, parents should accept that every decision has opportunity costs. Singapore is a work-centric nation focusing on productivity, which could compel employees to continue working overtime. Working parents choose to relinquish the precious time spent with their still-developing children at the cost of working just an additional few hours. However, the solution does not have to be binary—it can exist on a broad spectrum. It is possible to maintain family time as a priority while ensuring that work is not left on the back-burner. COVID-19 has shown us that effective practices such as remote working can spring up from previously unthought-of places, which afforded employees the flexibility to demarcate their working hours and still have meals with their family while boosting productivity (Barrero et al., 2020, p. 31). This illustrates how traditional working methods and mindsets can always be improved. It is about understanding the reason behind spending more time as a family and challenging the status quo prioritizing work.

Why is this imperative? Repeated bonding between parent and child helps to shape the child in their moral compass, their social interactions and also inoculate them against the hardships of life. Showing affection early on is paramount for children to grow up resilient and mentally strong. On the flipside, the larger implications of not spending time with their children are much more severe, as neglect affects the children much more detrimentally. Only 22% of orphaned children from two years to three years of age adopted into loving families were functioning normally (Winston & Chicot, 2016, para. 4).

This emphasizes how family bonding is much more important on the children's growth and mental well-being, and the act of playing can be done anywhere with a willing heart. Moreover, as Wright is meticulous in pointing out, children can develop various soft-skills from these games such as empathy and interpersonal communication. They learn intuitively from the visual and verbal information that their parents convey in small games and gradually form a mental picture of how the world works while fostering a stronger connection.

However, a common sight that is observed in modern society are children entertained by games on their mobile devices, isolated and inundated with information in their little bubble. They become part of the children's personal space; reducing opportunities to interact with friends and family and becoming more estranged (Hosokawa & Katsura, 2018, para. 1-2). Therefore, in light of these considerations, early and consistent playing as a family becomes an imperative to creating a nurturing household for the child, such that the child would prefer to stick with the family rather than withdraw into their shell. The child would be more self-assured and resilient to the pressures of life and also more empathetic. Hence, while Families may not see the immediate benefits of dedicating extra play time with their children, despite their current frenetic lifestyle, they should play more with their children because it will be a breather from work and result in a positive cycle of growth within their children.

Modern ways of living have definitely affected the bonding of young children with their families. At the onset, it seems to be negative, as the accessibility and ubiquity of these devices have led to the blurring of work and family time and resulted in a distant relationship between parents and young children. Some families do partake in movie-watching together or engage in cooperative games on the console. However, modern lifestyles can still be detrimental beyond the boon of improved technology. Nonetheless, I believe this work-centric mindset and practices can be upheaved so long as society recognizes the importance of forging strong connections as a family, and clearly demarcates the boundaries of work and recreation. We should strengthen our relationship as a family because it is the bedrock of one's community from their birth and throughout their life. Years down the line, children may not fully comprehend the effort their parents have put in to form a cohesive family, but they will definitely continue to remember them fondly through the many moments they have shared together—moments that money cannot buy.

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The Cost of Inching Towards the Horizon

· Teng Zi Yi ·

Figure 1. Changi Bay Park Connector, Singapore

Cycling into Changi Bay Park Connector, the smell of condensed briny saltwater filled my nostrils instantly as big waves along the coast greeted me with exuberance, crashing to form glistening foams. The calming morning breeze gently caressed my skin, abruptly disrupted by the departing planes' turbulence. Children cupped their ears in agony as the majestic plane soared past with deafening decibels. Huge warning signs screaming 'NO FISHING' went unheeded by numerous fishermen seeking the most promising fishing spots. Ships sluggishly swam across the horizon, rising and falling with the waves. The thick and lush foliage fenced buildings away from encroaching upon the idyllic sanctuary, giving visitors a respite from the suffocating and dense concrete jungle.

Drifting along the seemingly relentless and meandering path, I halted abruptly in horror. Several monstrous construction sites crept into the landscape, lurking within the depths of the trees. More suspicious details appeared. Palm trees commonly seen on beaches were nowhere in sight, rocks substituted sand on shores, and vast bottomless canals abruptly pierced through the bay. All these abnormalities could only be consistent with the conclusion of land reclamation. Peering at the iconic Changi Airport Tower that stuck out like a sore thumb, I completed my detective work. Reclamation activities, including the sprouting of Changi Bay, may have been part of upcoming plans to erect an unprecedented and grandiose mega terminal 5 (Ricafort, 2022). While such news trumpets an addition to an extensive list of achievements by Singapore, I think one should critically reevaluate its consequences.

This relentless expansion comes at the cost of its neighboring countries. Malaysia and Indonesia banned sand exports for self-preservation, a whopping 80 million tons of sand has been dredged off Cambodia (John & Jamieson, 2020), and Burmese farmlands have been eroded (McPherson, 2020). These ramifications underscore Singapore's insatiable appetite for sand and land expansion.

Greed is the abhorrent and selfish desire for excess. The sand trading industry mentioned is a microcosm of how greed influences countries' directions. At the macro level, many countries' greed unwittingly creates catastrophic consequences within and between nations. Inexplicably though, nations are still greedy. Why does greed matter so much to countries?

Oka and Kuijt (2014) explore varying opinions of greed throughout history and its role in societies. Although mostly seen as a sin, undesirable, and insidious, its presence is unabated throughout humankind (p.31). Collectively, greed-driven corporations and elites spearhead economic activities and generate surpluses for growth in arts, science and technology (p. 36). Greed in a nation does not create inequality, but inadequate governance enforcing ethical behaviors does (p. 44). Examples such as lack of "self-restraint, austerity, and thriftiness" in merchants result in the misuse of surpluses (p.42). Oka and Kuijt (2014) posit that religion and morality remodify greed for social good. Generosity and philanthropy as social goods in a "complex socio-economic and political system" form a wealth redistribution cycle (p.44), where the excess is given back into society for social development.

As proposed by Oka and Kuijt (2014), the wanton desire for excess wealth generates surpluses channeled for nation-building in different disciplines. Living in the technological age, people within societies have more avenues for greed as an instrument for greater economic mobility. Nothing beats the desperation and longing for better lives, seizing better work opportunities to narrow the income inequality gap. The innate greedy nature of humankind further amalgamates in capitalism, where corporate greed directly influences national policies (Hunter & Storey, 2008). The caveat is that the government must enforce ethical teaching or stringent laws, preventing unhinged corporate avarice from wedging inequalities. Greed matters as leverages countries can use for general advancements.

Drifting away from the benefits of greed, Keen (2012) questions greed as a condition influencing peace within a country. Keen (2012) argues that inequality-driven grievances have a more significant role than economically motivated greed in causing civil wars. Keen points out that inequalities in income and ethnicities have vastly distinct effects in sparking tensions (p. 5). Evidence reveals a compelling correlation between the extent of discriminatory treatment and political violence, while greed has difficulty predicting an outbreak of civil unrest (p.4). Keen mainly criticizes greed-driven violence as a shallow assessment, only quantifying the profiteering of rebellion. Simply attributing all aggression to superficial greed devalues and oversimplifies intrinsic emotional redress that rebels seek through civil wars (p.12). Without entirely dismissing greed, grievance and greed may be interlinked (p.15), similar to a chicken-and-egg argument where the consequences of both are unequivocally disastrous.

While not all countries experience civil wars, their underlying theme of grievance and greed is pertinent in all countries. Keen and some scholars generally define grievance as ethnic inequality and oppression of certain groups, but is it possible that these arise from greed? It is bewildering how governments are blameless in such situations. In actuality, hunger for authority and totality drives deep-seated discrimination against minorities, as seen in oppressive China's depravity against Uighurs or apartheid South Africa. By redefining greed, we can see how it influences peace. Tensions signal the extent of citizens' dissent and dissatisfaction with the government's avarice. Greed matters, providing a good understanding of conflicts within the country, as the fact stands that inequality is ineradicable in most countries (Race Report Statistics | Equality and Human Rights Commission, 2020). My stand on greed is thus a stark contrast to Keen's line of thinking.

Oka and Kuijt (2014) buttress the necessity to embrace economic greed as a crucial catalyst for prosperity in countries. On the other hand, Keen decries the need to pay attention to financial greed and advocates addressing deep-seated social grievances instead. Oka, Kuijt and Keen extrapolate the need for citizens to unite to reap the benefits of greed and place the onus on the government to modulate greed and its impacts permeating all layers of society.

Yet, why have Oka and Kuijt (2014) and Keen (2012) failed to account for greed in my observation of Singapore's greed eating up its neighbors? They have overlooked the taboo surrounding greed, where greed is never explicit but always implicit. Politicians are greedy for power; they use newspeak and falsehoods to put up a facade of moral righteousness when doing questionable acts to fulfil their desires. Effects from greed ripple internationally, such as the imperialism of European empires into Asian countries, the UN condemnation of the Israel-Palestine conflict (United Nations, 2022), to the current Russian invasion of Ukraine. Some developed nations deepen cracks in weaker nations' social fabric via economic and military intervention or diplomatic coercion via financial sanctions. They act as paradoxically "peace-spreading pacifists" to end purposely worsened conflicts, to spread their morbid influence over a region and inject hard power to extort resources from vulnerable countries. There is a cost to aiming for one's horizons, whether for the invader or for the invaded.

Greed underlies the motive for monopolizing a lucrative resource-rich region. Insensitive nations even flaunt their military prowess unabashedly to intimidate neighboring countries to back down on contested land resources, such as China's creation of artificial military islands in the South China Sea dispute (Lema, 2021). And at its core, such face-offs heighten aggression and wariness in the region, souring international relations and neglecting citizens' interests. Nations thus personify greed, acting in despicable ways to attain selfish objectives. Henceforth, I would argue that greed matters as it surpasses borders and is a decisive factor in diplomatic actions that either benefit or harm a nation. I believe the importance of greed is not as myopic as discussed by Oka, Kuijt and Keen. The transnational influence of greed thus explains Singapore's exchange with its neighbors.

Yet, my point is not meant to discredit or condemn these behaviors. Afterall, it is only human for the government to always persist in the direction of progress, albeit at the cost of other countries or in Singapore's case, at the cost of ecological preservation by smothering marine habitats. What we should not treat as normalcy, is for governments to continue feigning ignorance and having tacit discourses regarding greed. Governments should start admitting their dishonesty, focus on failures that are derailing greed's potential avenue for global good. As Singapore would realize, no matter how much it wants to reach towards the horizon, it could never be at the horizon, an apt representation of how Singapore's greed would sustain itself.

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A(I)rt: Artificial Intelligence and Art

· **Alyssa Yip Zhixin** ·

Calmness filled this space, drowning out the cacophony of buzz and bustle from the city outside. Soft shadows cast by daylight filtering through the water-filled, glass panes overhead rippled across the polished floors and chalk-white walls all around. The chilly breeze coupled with waves of natural light immediately washed over me as I stepped through the colossal wooden doors of the Coleman Entrance. Nestled in the heart of the Civic District stands the sophisticatedly synergized former Supreme Court and City Hall building–an establishment which has rebranded itself as the National Gallery Singapore. Besides being hearth to a multitude of significant artworks, the refurbished monument flanked by intricately sculptured columns stands as a grandiose piece of artwork, a masterpiece in itself.

The warmth of sunlight followed me closely as I wandered deeper into the spacious grounds of the gallery. Artworks of all forms ranging from paintings to sculptures illuminated by the incandescent daylight came to life one-by-one as I strolled into the exhibition hall, all unique in themselves, each one having a different message to convey. The flashing and colorful artworks batted their eyes at the exhibition goers who passed by, arresting their attention and causing them to halt and admire their flamboyance. Other pieces stood stoic, exuding confidence in their own right, wearing their own eccentricities like a badge of honor.

Enticed by the artworks, I slowly lost myself in the pulchritude of the gallery till an all-familiar mechanical buzz broke the charm. I glanced down at the notification on my phone, but it was the pixelated artwork of sea waves serving as my lock screen wallpaper that caught my attention instead. The wallpaper was downloaded from DALL-E 2, an artificial intelligence (AI) system which generates realistic art pieces from descriptions input by the user. The digital art piece posed a striking contrast to the watercolor canvas that lay before me. This led me to wonder, would traditional forms of art, such as paintings and sculptures, be replaced or transformed in the face of technological advancement? With the rise of AI and digitalization in our world, how can human artists and art galleries stay relevant?

We often hear that AI is “taking over” the world and undeniably, AI has infiltrated many aspects of our lives. Initially, AI was employed exclusively within the computer science realm for data analysis, but we now see AI dominating industries including healthcare and e-commerce. In “Should Human Artists Fear AI? A Report on the Perception of Creative AI,” Caterina Moruzzi (2020) acknowledges that AI is no longer restricted to carrying out tedious tasks that humans find difficult to complete, but also being implemented in the creative arts domain. Moreover, the author recognizes that digitalization has transformed traditional art concepts through the introduction of new artistic instruments and AI is now the avant-garde tool for artists, be it in composing music, novel-writing or visual animation. A survey conducted by Moruzzi at the University of Nottingham involving 203 participants, found that the public is in favor of AI supporting time-consuming and arduous tasks, but less welcoming towards the prospect of AI being in the sector of creative arts. The majority would not consider AI to be "creative" in the near decade, due to AI art lacking in "the individuality and emotional involvement necessary to be considered art" (Moruzzi, 2020, p.181).

I ponder over whether this bias against AI, as illustrated from the survey, is due to people focusing on evaluating the AI's end product and not the creative process behind the art piece? Just like how artists study art history and later choose their preferred form of expression, AI systems are fed centuries worth of art, trained with computational parameters, and are then allowed to make decisions in curating the final art pieces. This overall process of AI art creation coincides with conceptual art, where the idea behind the artwork is prized above the final presentation of art. The acceptance of different art forms has noticeably expanded throughout the twentieth-century to include performance, conceptual and photographic art, as the public's perception of art has evolved and gallery curators include new art media in their exhibitions. Photography, when first introduced, faced resistance from the art creating community as it was seen as a threat to replace naturalistic paintings. Comparatively, AI systems function like a camera, a tool for the creation of art by an artist. Perhaps, as digitalization becomes more widespread and biases against AI art change, we may see AI art exhibited extensively in future art galleries.

"Future scoping," a term introduced in "Digital Engagement in a Contemporary Art Gallery: Transforming Audiences" by Harding, Liggett, and Lochrie (2019), refers to the need for art galleries and museums to review their curations to ensure that art exhibits are not obsolete when made available to the public. Harding et al. examined the use of digital curations in reforming a contemporary gallery in North Wales in order to meet this expectation. As suggested by the authors, the inextricable link between traditional and digital art forms coupled with the need for future scoping, calls for modern technologies to be incorporated in galleries for increased engagement and to provide immersive experiences for the audiences.

In view of such modern developments, I believe that contemporary exhibition goers not only visit galleries for the artworks on display but also the experiences they can take away. Whilst the integration of technology into galleries remains essential in the face of increasing AI dominance, gallery curators are also required to empathize with the likes and preferences of the general public. As Harding et al. (2019) note, galleries' audiences have increasing expectations for ways to connect with the arts, thus the future of art galleries and museums depends largely on curating captivating exhibitions. For art galleries to stay in trend and continue to attract patrons, art curators must stand in the shoes of the audiences and should explore the emerging field of AI technology for curating exhibitions which are immersive and interactive.

Moruzzi's (2020) reports public biases against AI art partly due to the absence of artists' emotions behind the AI art pieces, but Harding et. al (2019) shine a promising light by suggesting that "digital innovation has the capacity to bring in missing voices to galleries'' (p.6). Harding et al. show how modern technological elements currently implemented in galleries are able to bridge the gap between the audience and inanimate artwork. In my opinion, this paves the way for AI programs to be used in establishing audience engagement with AI art, positively shifting perspectives towards technologically-curated art. Contrary to the widespread notion that AI should not be involved in the art scene, the fact that trained AI systems can produce audience-relevant art pieces and possess the potential of being unconventional as well as enthralling, particularly when afforded the space to do so, can eventually receive a warmer reception from the audiences.

As art galleries refashion themselves to suit the changing demands of the public, artists too should embrace digital transformations by wielding AI as a tool, and possibly exploring it as a worthwhile partner in art curation. I liken AI to the hands of the artist which can learn over time as well as gain "muscle memory" in making the perfect and desired strokes or carvings in art creation. Therefore, just as how an artist is not afraid of his or her own hands, there is no need to fear AI possibly replacing human artists and being a threat to art. AI is designed to run parallel to human intelligence in its function, as both AI and artists bring different specialties to the creation of art. I believe that with technological advancement and greater development in the production of artworks, the collaboration between human artists and AI is filled with immense possibilities. Just like my lock screen wallpaper, a sea of change is transforming our arts scene in novel, ground-breaking ways; let us partner up to ride the new wave.

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Pioneer Road (2023): 30-32

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Skateboarding, Subcultures, and Self-Contradictions

· Jakin Tan ·

The empty skate park was a concrete scar among the green and glass in the heart of the city. The bright colors of the newly commissioned graffiti wall at the perimeter stood in sharp contrast to untidy scribblings on stair sets and obstacles. A towering non-smoking sign was plastered with stickers, while ironically surrounded by half-smoked cigarette butts. Vandalism, graffiti, smoking and skateboarding all appeared to be associated with a broader street culture.

A photoshoot was in progress; people took turns to pose at the stair set, graffiti walls, and around the park. They were dressed in the typical streetwear garb—oversized tees, baggy pants, long socks, and hype sneakers. It was quite apparent that none of them were here to skate. A contemptuous thought invaded my mind: "Posers."

The park was encircled with hedges and walls, which portrayed a symbolic meaning to me. Street culture was full of vices which needed to be contained. The walls might have been built by those outside to keep these undesirable practices from spilling out into society. However, they also seemed to potently represent my own thoughts, to keep people who did not belong in the skate park out of it. I felt the need to "other" the photoshoot group and define street culture by my rules. As I thought further, I realized that by someone else's standards, I may not even be a part of the culture I lay claim to. My own outfit, a conventional sized t-shirt with skinny jeans, would not be appropriate to some skaters. Every person who self-identifies with a subculture may have varying opinions on the defining characteristics that grant membership, often benefiting from their personal experiences or views, creating many points of contention. It is so difficult to define a subculture, yet many feel the need to do so regardless.

Most subcultures start off being excluded or showing variance from the mainstream. There often is a sense of pride, where they are defined by their deviance from the norm. Ironically, by establishing a subculture, a formal social structure is created not unlike the mainstream, with its own regulations and norms. The prefix "sub" in "subculture" already denotes the subordination of it to the mainstream—a cheap copy, an inferior birth. Being an attempt at divergence, why do subcultures still shuffle towards imitating the structure of its parent?

The act of turning into what one intentionally tries not to become is a timeless trope explored in literature, film, and music. In Shakespeare's *Macbeth*, Macbeth finds himself killing his friend and the king after it was predicted that he will gain the throne (Shakespeare, 1992). Kendrick Lamar narrates in *To Pimp a Butterfly* a story of a young rapper who triumphed against the unjust system of America, only to find himself seduced by the vices of capitalism and success (Lamar, 2015). Art imitates life, and this phenomenon of the self-fulfilling prophecy is demonstrated in the concept of stereotype threat (Spencer et al., 2016). Minority groups face extra pressure to avoid negative stereotypes, a weight that pushes them to act in self-sabotaging ways that decrease their performance in some way. In the context of developing subcultures, the effort to escape negative stereotypes will be what causes them to be reinforced, because in doing so, the presence of the negative stereotype is made clearer and more significant. This leads to a realization of the undesirable, a self-fulfilling prophecy.

To take a dive into the macro-view of inevitable structuring of a subculture, perhaps it requires inspection of micro-patterns that cause such cultural shifts. The Stereotype Threat to one's personal identity causes one to distance themselves from a negatively perceived community. "I'm not like them"—a sentiment commonly echoed by those who destine themselves to self-exclusion—only serves to define "them". Those who choose to dissociate themselves do not conform to the presumed image, while those who retain the subculture identity are often prototypical examples aligning with these stereotypes. The negative perception of the subculture simply becomes more accurate as the community becomes more homogenous. The self-excluded may also find that they become more commonly associated with the subculture the more they try to distance themselves from it, because of the growing potency of the subculture's identity. To the outsider, sharing a common experience with that subculture activates (fallaciously) the stereotypes of a certain group. "Oh, you play League of Legends. I assume you're a virgin?" Perhaps there is a façade that people in subcultures are responsible for their own identity, when in actual fact they have been defined by those without.

Do the members of the subculture itself have any say in the process? In co-operative social systems, the individual is more likely to conform to altruistic behavior when more people are expected to contribute (Fehr & Fischbacher, 2003). In the past with hunter-gatherer societies, all members have a right to their share of the community's resources. Selfish members usually utilize resources without contributing to maximize their effort to reward ratio. Meanwhile, altruistic members contribute to the pool of resources so that others can benefit more. Co-ordinated contribution often leads to individuals reaping "altruistic reward," where the collective benefits when more people pull their weight. Fehr and Fischbacher (2003) reason that selfish members could be swayed with such incentives to behave similarly to selfless members and contribute, but only difference is that they are motivated by their own desire for increased personal gain.

It is therefore vital that individuals' intentions are separated from their actions, as selfish intentions can still lead to co-operative behavior. In subcultures, members may also make similar choices. The community resources in this case would not refer to tangible things, but social currency that they gain, like identity for the individual and social status. Gatekeeping has been said to be a form of co-operation, where the act of protecting the existing norms of a subculture would ensure that the subculture is able to provide the same identity and community, if not better, for all members. However, although the behavior is co-operative, the underlying intentions may not be altruistic. I could discriminate against skaters who cannot do tricks to "maintain the subculture's integrity," meaning that skaters would thus only be associated with cool tricks. However, this stems from a self-centered desire to retain or gain more social currency in possessing the "skater" identity. It would therefore be more likely that co-operative actions to support subcultures built on individualism and divergence from the mainstream are selfishly motivated. The individual desires a specific benefit which they then work to preserve and increase. The subculture would thus probably only be constructed through whoever most aggressively projects their own identities onto the community.

The patterns observed by Spencer (2016) along with Fehr and Fischbacher (2003) cause me to realize that my own identity can never be both inherently defined and significant. After all, what is the value of divergence if there is nothing to diverge from? The irony is apparent: my identity cannot be controlled fully by my actions and is affected by others, therefore attempts to curate it will be fruitless. However, the same identity is made significant through the perceptions of others. Therefore, those who truly desire to form a comprehensive self-identity must inevitably look outward for approval, whether at members of their community, or through comparison with outsiders.

People will always try to differentiate themselves in an attempt to shape their own identity and avoid blending into the masses. Yet in doing so they only exchange one system for another, defining themselves by being part of another collective. As long as our identity relies on external definitions and social approval, this struggle will likely persist. This discussion opens a new can of worms: As communal beings, can humans ever be truly individualistic? Universally, it is known that every person born on this world has no identical copy. This uniqueness itself is an inherent value to which my self-proclaimed skater reputation, or any other identity, pales in comparison. What else on earth would I even want to define myself with?

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CC0001

The Quest for Truth

· Jessica ·

"People suffer in the absence of hospitals! The government faces ignominy as the appointment of bureaucrats comes under scrutiny."

My eyes crinkle with distress as I skim through my old article. Splashed over the pages were the failings of the current administration. It outlined the path of the opposition to the legislative assembly. Looking back, I had been oblivious to the other facets of reality, as the current government had won the elections with a majority.

Perhaps I had overlooked their development schemes that sought to mitigate the plight of the poor. Or maybe I had missed their international diplomacy, which had led to their victory. As my eyes flicker over the text, I realize that maybe the veils of adulterated views and half-told tales resonating over the media have altered my perception of reality. Furthermore, it is possible that the general need to find a sense of belongingness with the society and environment around me was holding me back from questioning my perception. This made me wonder, how accurate are my current perceptions about the world?

Surrounded by today's thriving media, we tend to believe only in the information we have received and think that that represents the totality of what knowledge is available. Thus, do we remain oblivious to the concept of truth existing beyond our current perception? A limited perception was possibly holding me back from understanding the world better. My desire to overcome this barrier fueled me to distinguish reality from the world I perceive. This was where my quest for truth began.

Perhaps the world we believe in is just a poor copy of reality, as highlighted by Juge (2009) while summarizing the Allegory of the Cave. The allegory, presented by the philosopher Plato, highlights the underlying issues with our perception of truth and reality. It presents prisoners—a metaphor for humans - chained in a cave, destined to see only the shadows around them (Figure 1. Allegory of the Cave). According to Juge, to them, the truth would be the shadows of the images. These prisoners are hesitant to go beyond the cave as moving ahead without a vision causes apprehension and helplessness. They feel insecure without the shelter of their pre-existing world and prefer to remain shackled. When liberated to the real world, they express disbelief and outrage, as it is a "process painful in both the physical and metaphysical senses since they are used to neither light nor reality" (p.18).

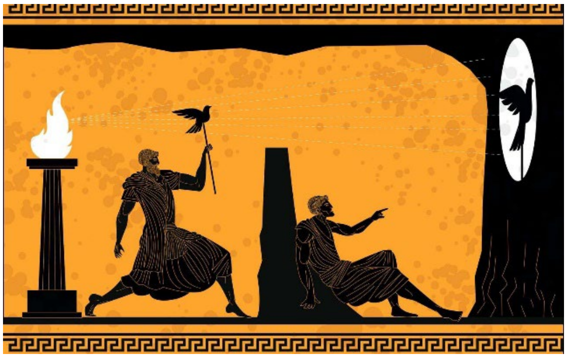

Figure 1. Allegory of the Cave
Note. From MatiasEnElMundo / Getty Images (n.d.)

Along the lines of the allegory, I wonder if, in modern times, the media represents the chains that restrain us from discovering the true essence of reality. Perhaps our version of the truth is impaired as we haven't been able to look beyond the shadows to delve deeper into reality. The roaring debates and podcasts, stimulating news reports, and enigmatic social media posts reverberate around us and trap us. Furthermore, we may be terrified that a glimmer of light may punch a hole in our most basic assumptions, as showcased by the prisoners' unwillingness to leave the cave. Such thoughts prevent us from questioning the sanctity of such sources, and we build our version of reality around them.

While this does help establish that our perceptions create the most compelling beliefs, restraining us from reaching out to reality, why does this happen? To interpret this effect, we must analyze how truth and perception are related and decipher the reason behind the contrast between them.

Communication scholar Sean Tiffee examined the connection between perception and reality in a 2016 TED Talk. He stated, "between perception and reality, there is a gap" (Tiffee, 2016, 2:37). While he does not believe that the entirety of our understanding is an illusion, he does stress that the information we perceive is just a part of the more significant picture, which alone cannot determine the absolute truth. He reasons that limited access to information causes this gap. He elaborates on the thesis of rhetorical theorists that we experience this gap as "we are born into a series of cultural narratives" (Tiffee, 2016, 3:50). The issue here lies in the process through which we come to embrace the narratives. When we believe we have access to reality with our limited exposure to it, we assume we have a monopoly over the truth. We take these narratives and spin them into our personal stories. The belief that these stories are the only representation of reality causes us to remain in the gloom of ignorance.

Tiffee's idea that the gap between perception and reality is governed by narratives helps analyze how modern media may alter our reality. Despite being bound by the media, we might glimpse a part of the truth and not altogether a false perception, but it alone cannot determine the truth. The news and information we receive may be partially factual, but they are just the shadow of reality and may hide information from us. A deep chasm lies between our perception and the truth; that contains the intricacies of embracing more wisdom. Before spinning our personal stories and declaring them as the absolute truth, we must pause to ponder if they encompass the various aspects of the topic or only highlight a trivial part of it. This idea postulates that our perception of reality may have deviated from the path of the truth as we forget to mind the gap between perception and reality.

Reflecting on Juge's and Tiffee's statements establishes that a lot lies beyond our humanistic perspectives. While Plato's allegory inspires us to discover the truth lying beyond the cave, Tiffee asks us to cross the chasm of obliviousness to get to it. Both ideas relay that we need to broaden our horizons to ultimately get to the truth, which lies beyond our current perspectives. But does this quest for truth ever come to an end? Or is the journey for truth endless?

Perhaps the truth is ever evolving, making it perpetually unattainable. Every minute detail we uncover on our journey adds to our understanding and improves our perception of truth, but it may not end there. The concept of truth is colossal. It may encapsulate a plethora of details which remain obscured. Each step in this voyage helps us understand our reality better, which in turn gives us the ability to look further into the light for more facts. Yet, due to the mammoth scope of truth, there may always be more mountains to be scoured. This way, the quest for the truth might be endless as we always strive to refine our perception.

The prospect of an eternal expedition may seem daunting to many. Though doesn't the search for truth always require relentless courage? As evident from Juge's and Tiffee's interpretations, it takes immense valor to scrap our existing beliefs and adopt a new understanding of reality as we question our personal narratives. Drawing parallels from these analyses, we realize that we must draw courage for our endless quest for truth as we reconsider our existing beliefs at all turns.

Yet one may find it reasonable to look for the reality if this journey has a final destination. Plunging into a bottomless abyss may seem futile! Then, why must we endeavor to look for the truth? The answer possibly lies in appreciating the intertwining strands of life and reality. Snippets of reality build our perspective. This perspective determines the direction of our life.

The path we take includes numerous significant moments. These moments ripple through the pages of our lives and define us as individuals, eventually leading us to our dreams and aspirations. Our conviction to follow these dreams must drive us ahead on the quest for truth.

Now the question that arises is: *will you remain blinded by your current perceptions, or do you see the way forward on the endless quest for truth?*

Acknowledgements

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CC0001

Honk Honk: It's Your Childhood

· Tan Ying Xuan ·

Do you remember a person by their voice or appearance? I remember people by their faces. But there is someone that comes to mind whom I remember more by sound than sight—Karang Gunis. Translated to "gunny sack" from Malay, these rag-and-bone men go door-to-door in HDB blocks tirelessly to collect our used recyclables such as newspapers and electronics for cash in return.

Like a conductor of his own travelling orchestra, Karang Guni uncles perform their best symphonies while trudging through corridors of HDB blocks. Belting out "*Karang Guni… buay bor zhua gua-sa-kor, leh-lio dian si kee….*" at the top of his lungs; pushing their rusty iron trolley with wheels creaking like a quartet of tambourines; the dragging of faux leather sandals against the ground were castanets in accompaniment; and a bike horn that would ring down the corridors, with the conductor pressing it whenever he pleased, being the mastermind of his repertoire. The same symphony would echo through the corridors of all HDB blocks, establishing this to be part of our cherished and much-missed childhood. Dressed for the occasion, these conductors wear plain polo t-shirts with a neutral pair of Bermudas. *What an interesting choice of attire.* Was it because this "uniform" was easily recognizable? Was it to beat the merciless heat of Singapore? Was it the most inexpensive thing in the store? When I was seven, my father gestured them over to clear our newspapers. My mouth hung in bewilderment when my father received $4 in exchange for a stack of newspapers, half the height of myself. "They are clearing newspapers for us. Shouldn't you pay them instead?" My heartstrings would be tugged every time I heard the lift doors open as the volume of honks would be at its maximum. After tirelessly traversing 11 stories, I would feel a sense of relief and a pang of guilt if they arrived with a full trolley of newspapers. As part of my cherished childhood, I often hope to relive it again by playing the same programs on the TV for nostalgia. But a component would always be missing: the honk that always disrupted my favorite shows. Thinking back, I had done nothing more than muster an occasional smile when they caught me peeking through my door. The closest interaction I had with them was when I hid behind my father who received $4. So why do I feel empathy, or maybe even sympathy for them, even though I have never interacted with them? I know so little, but feel so much for them. This has led me to question how much we let our emotions affect how significantly we remember our culture.

The presence of emotions is part and parcel of human nature, but regardless of how much control we have over them, what do we know about their origins? In Dr Lisa Feldman Barrett's study of emotions in *How Emotions are Made: The Secret Life of the Brain*, she deduced that "… purely physical sensations inside your body have no objective psychological meaning. Once your concepts enter the picture, however, those sensations may take on additional meaning." (Barrett, 2017, p. 29) In other words, witnessed occurrences from a third person's perspective have no intrinsic meaning to our lives. We have to run it through our own preconceived and personalised ideas for stimulations to be registered in our brains, giving rise to emotions. Additionally, she hypothesizes that "Through prediction and correction, your brain continually creates and revises your mental model of the world" (Barrett, 2017, p.59). By Barrett's definition, our brains are wired to predict the fate of current events by using our past experiences to properly relate to the situation. When these processes happen simultaneously, it gives rise to an emotion created from a particular stimulus, like joy, grief, or envy. Based on this hypothesis, I have started to wonder what exactly in my upbringing has caused me to link the sight of Karang Gunis with feelings of sympathy and guilt. Could it perhaps be the recitals of the phrase "not to grow up to become like them" because it will not make me a lot of money, or the never-ending lectures of how I should always respect my elders?

As my first observations of these peculiar individuals were made, my days and nights were surveyed by my parents' watchful eyes, cultivating me to become the well-mannered daughter, sister, and citizen that they wanted me to be. Through the hours of lectures and reprimands, treating the elderly with compassion and respect had become second nature to me. Perhaps it was fate that they showed up at the opportune moment, because I was able to practice my newly learned feelings of respect and empathy with them. With the astounding consistency in which they frequent blocks of my estate, these individuals have garnered my respect and empathy for years, possibly explaining my fondness for them today even though I have had little interactions with them. Even though we do not live under the same roof, their omnipresence in almost every HDB block makes them a part of our childhood and upbringing, and I will always associate their presence with respect and compassion.

Every now and then, the lessons of filial piety would be put to the test during cultural celebrations. Apart from the neon rays of light emitted from dragon-shaped paper glass lanterns, serving tea to the elderly was imperative for the occasion. My heart would always be as full as the moon when I saw the warm familial love, but why can this feeling only be experienced on certain days of the lunar calendar?

The significance of culture was something I wanted to explore more about. In a TEDx Talk featuring Eva Zhou, with a passion to keep her culture and heritage alive, she mentions that culture "carries a lot of meanings, the joy of sharing beautiful moments, details of our heroes and the wisdom of the wise passed down through many generations" (Zhou, 2021). Zhou believes that cultures and heritages are the means by which essential memories are brought through time. Cultures are also a conduit that traditions rely on to be kept alive and relevant. Furthermore, Zhou also believes that "our culture shapes who we are; it keeps us together as a community as society, it gives the values and explains the many traditions that we have." In other words, she stresses how important cultures are with regard to a common identity to which we all relate to.

Having reflected on Barrett's and Zhou's perspectives, I believe that there is a symbiotic relationship between emotions and cultures. Confucius said that the appropriate spirit is crucial in determining the efficacy of a ritual practice. In other words, certain emotions that can only be felt when having a first-hand experience of these specific cultures. Like the warm familial love, warmer than the candles of lanterns at Mid-Autumn Festivals, there is a spontaneous emotion that arises when we interact with Karang Gunis, be it physically or mentally. This reflex, when combined with sentimentality, motivates us to keep the flame of these cultures alive, since understanding where we come from is a crucial part of understanding who we are.

Circling back to Karang Gunis, one possible reason why they are epochal could be because we collectively deem them to be so. Though some may see these men as nothing more than mobile recycling bins which turn their trash into treasure, the sight of them is a universal experience amongst most Singaporeans, and it collectively has made an impact on us. The shy peeks through the rusting iron gates, the light tug on my father's shirt, the wafting aroma of old newspapers. This could be something my children would love to experience: how the faint honk of a bike horn can unlock echoes of the their childhood in their adulthood. But perhaps it is I who refuses to let these uncles rest. After decades of them carrying the recycling industry on their backs (and trolleys), it is about time they rest.

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Stuck in Time

· **Joy Lim Le Xuan** ·

'LAUNDRY 24 hours,' reads the street sign above a laundromat, along the main Geylang road. The following sign, one shop away, is outlined in neon green and red, cheerfully adding: 'ROMANCE ADULT SHOP.' In these two signs, the 24-hour duality of Geylang presents itself—affordable neighborhood and red-light district. Despite Geylang's indecent reputation, its salacious side is less obvious than I had expected. As I wandered through Geylang, I had passed by many shops without glancing twice. However, seeing those two street signs beside each other made me realize how Geylang seemed to be hidden in plain sight. Looking around, I cannot help but focus on the uncle sitting behind a table, peddling his wares. Sex drugs, laid on a cloth—all the easier to gather together and make a break for it, should the need arise.

Further along the main road, an elaborate Chinese temple rises amidst the shops and buildings, with a stately statue of Guanyin, bodhisattva of compassion, watching atop curved temple roofs. She gazes across the street, where a bold golden sign of a KTV lounge glimmers back defiantly. In the distance, the off-white minaret of a mosque peeks above the shophouses, aligned on the same side of the road as the temple in religious solidarity. Caught awkwardly in the middle of their stand-off, I turn away, deciding instead to explore the lorongs that branch out from either side of the main road.

I recall, from a mish-mash of articles and forewarning whispers, that red-light establishments are denoted by red house numbers. True enough, scarlet number plates covertly decorate many terrace houses as I walk along the even-numbered lorongs, like badges worn by a secret society. The occasional red paper lanterns swaying in the light breeze. They echo the odd-numbered lorongs, though the latter does not deign to conceal itself—there, crimson red banners proudly identify Buddhist associations.

Vice and virtue intertwined, Geylang constantly reveals itself as a liminal space: full of religious piety as it is of seedy entertainment. While the religious perspective often emphasizes life beyond death, the hedonist lifestyle instead embraces the fleeting pleasures of the present moment, indulging oneself without considering future detrimental consequences. Temporal tension is seen especially in today's generation, amidst a technological backdrop of instant gratification, where the popular motto of "you only live once" governs much of our decision-making. What truly matters then, the impermanence of one moment or the long span of a lifetime?

The here and now is more important, according to a school of thought called no-futurism, which is the idea that the future does not exist at all. Tim Button, in his paper "There's no Time like the Present" (2006), reviews past challenges raised against no-futurist theories to argue that "the present moment is privileged in being the last moment of time" (p. 130). He means that the moment one is currently experiencing is special, because all time has happened up to this point. Furthermore, Button asserts that every moment we experienced was special, and every moment we are experiencing is special (p. 133). In other words, past decisions were made with the belief that it would benefit us then, but we make new decisions now because the present matters to us now. This perspective of time, put into practice, suggests that since the present is the only point in time we are living out, we should maximise the present. Hence, the fleetingness of the present moment is exactly why it matters so much.

It can then be argued that being deeply immersed in the present is the only way to make time real for us. We focus on the small immediate moments because they are the only things we feel; they are the present phaneron which breaks the feeling of illusion, while the future remains elusive and out of reach. This is particularly apparent in youth culture, where we tend to make more reckless decisions with the rationale that the experience itself is worth enjoying. From cutting back sleep to spending time with friends to skipping classes out of boredom, these choices reveal the tendency to satisfy our need for instant gratification. Youths have biological reasons for heightened reward-seeking behavior (Steinberg, 2008), but this may be compounded by our fast-paced society, which rarely offers breathing space amid our busy lives. Seizing the present moment may then be the only way for us to gain reprieve, no matter how momentary.

However, there is a potentially more troubling question. In this discussion about enjoying a moment versus planning for the future, are we naively assuming that we even have a choice? Henri Bergson (2002) puts forth the idea in his book, *Time and Free Will: An Essay on the Immediate Data of Consciousness*. Challenging how we experience time, he suggests that the future is something "which we dispose of to our liking" (p. 11), filled with our projections of our desires. As he aptly puts: "The idea of the future, pregnant with an infinity of possibilities, is thus more fruitful than the future itself, and this is why we find more charm in hope than in possession, in dreams than reality." (p. 11). Bergson proposes we inevitably chase after the future because we desire what is out of our reach. When thinking futuristically, we can only be satiated by our limitless imagination of what the future could look like—the present pales in comparison. Therefore, we have no choice but to endlessly dream of the future, to allow our minds to reshape disappointing reality into a rich, irresistible fantasy.

Bergson's point of view completely upends our relationship with time. If our longing for the future is innately begotten by the human propensity to hope and dream, then we do not get to control how we experience time. In fact, the roles are reversed; time controls our experiences. Time becomes an ever-present entity ruling over us, as our lives are solely built around pursuing our future dreams. Even when enjoying the present moment, we are already looking forward to the next thrilling experience, because our current happiness cannot live up to that of the imagined future. We rush through life just to experience the next moment, assuming we oversee the journey, when in reality we are trapped in a time model of our own making.

We are then faced with two contrasting perspectives: one, derived from Button's philosophy, encourages us to treasure the present moment because it provides precious happiness, no matter how momentary. The other, derived from Bergson, says that our enjoyment of the present moment is always diminished by our continuous anticipation of the future. Put together, the implications seem grim: try as we may to immerse ourselves in the present, it is meaningless in a world where humans find comfort in hopes over reality.

However, as opposed to a purely nihilistic view of time, this perfectly describes the consequences of a fast-paced world. Our propensity to indulge in dreams is entrenched in the very structure of our society, which prioritizes future wellness. We actively control how we experience time, carefully planning the day-to-day to maximize time. With the duration of every activity scheduled to the minute, a perfectly efficient, automated world frees up much time for us. Yet, this free time is riddled with worries and plans for the future, as we rush through the present moment. Even genuine attempts to enjoy the present are perverted by a sensory-overloaded world that constantly demands our attention, where we seek new experiences for the sake of it.

There seems to be no winning. Either we are stuck in the present, or stuck in the future. Either way we are the ones left with no autonomy in the situation. Perhaps, then, the radical solution is to set apart time to experience the present in stillness. In the transient hush, we momentarily break away from the hurry; we get to see what life offers beyond the temporal confines and expectations we have set for ourselves. The only way to be free from time is, oxymoronically, to yield to time. If we step back, if we allow ourselves to exist—kindly—maybe then we will be able to avoid getting stuck in time.

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The Performance of a Lifetime

· **Kong Pek Yan** ·

The steady groove of the drums, intricate chords of the piano, grounding strums of the guitar; and resting perfectly atop, the jewel on its crown, Shazza's warm voice as it glides through lilting melodies. I am in the Esplanade concourse, enraptured by Singaporean singer-songwriter Shazza and her band. The open-air-like indoor space is filled with people of all ages, some sitting on benches or the floor, and others standing around.

As the song fades out, enthusiastic applause erupts. I join in, glancing at the audience around me. That's when someone catches my eye: an elderly man sitting on a bench, dressed in a T-shirt and shorts, one foot couched in a worn slipper on the floor. And resting on the bench with him, his other bare foot. My reaction is not exactly visceral, but I do have to stop my nose from crinkling and my eyebrows furrowing, reminding myself not to stare. Pulling my gaze back to the stage, I realize that just as I am a part of Shazza's audience, I am the elderly man's spectator as well. The same way I watched and judged her performance, I watched and (perhaps prematurely) judged his actions. And in this wide room where I can see everyone, and everyone can see me, I am everyone's audience, and they are my audience, too.

This is an understanding usually relegated to my subconscious, now brought to the fore, but even subconsciously, my awareness of being watched permeates my actions, making me behave in accordance with the identity I want to embody and display. For example, when I clapped, I played my role as an audience member, showing my appreciation. That was my "performance" as a member of a collective, but it happens on smaller scales too. The vocabulary I use with professors differs greatly from the lingo I use with friends, a bid to show my professional and friendly sides respectively. We wear these identities: audience, student, friend, like a second skin, so naturally assuming them that they feel nearly indistinguishable from our genuine selves. This blurring of the lines between what is real and staged led me to wonder: How much of our interactions with others is merely performance?

The question provokes clarification on the definition of "performance," for which a possible basis is provided in David Osipovich's (2006) "What is a Theatrical Performance?" A theatrical performance, as he defines it, is crucially *live* and *enacted*. In a live performance, there must be interaction between the performer and audience, no matter how subtle, and this makes each performance different. Although certain elements of a theatrical performance are intentionally recreateable, like an actor's delivery of a line, the performance as a whole is unrepeatable due to live interactions between actors and their audience. For example, the audience's enthusiasm might influence the actors, and these interactions are not scriptable or reproducible. Thus, every theatrical performance is unique. Whether a theatrical performance is enacted depends on the presence of both pretense and awareness. The actor must knowingly pretend to be someone else for the audience, and the audience must be aware of this pretense. Without pretense, theatrical performance is indistinguishable from normal actions, and without the audience's awareness of pretense, it is deceit. This differentiates theatrical performance from public speaking and storytelling.

Given the relative similarity between social interaction and theatrical performance in terms of medium and actors, Osipovich's definition is worth exploring. Firstly, our interactions inherently fulfil the live criteria, where even with great delays between communications like in social media interactions, there remains reciprocal influence between the performer and audience. In contrast, determining the presence of enactment leaves more room for discussion. In my earlier interpretation of performance in interaction, where we express and perceive certain identities, pretense would appear not necessarily in each individual action we take. Rather, it would be based on how much those identities represent our true self. Strictly following Osipovich's definition, however, my actions in my observations would not be performance due to a lack of awareness of any such pretense. Additionally, as the roles we play in our interactions are often subconsciously managed and not actively pretended at, and audiences tend to take performers' actions at face-value, many of our interactions would likely not be performance. However, our interactions could be categorized as performances retroactively if we reflect and realize our pretense, and for the same interaction, our audience discovers a contradictory piece of information and deduces that our actions were a pretense.

Further insight on sincerity and pretense is given in Adam B. Seligman's (2009) "Ritual and Sincerity," wherein Seligman presents ritual and sincerity as alternative ways to frame social thought, action, and interaction, both coexisting, albeit with tension. A ritual is an iterated performative, a repeated and formalized action that may not convey its literal meaning but performative ones instead. Take everyday greetings as examples: the common "How are you?" does not typically expect a serious and honest response, but is instead a ritual of civility and etiquette. These rituals create what Seligman calls a subjunctive universe, where the individuals involved jointly construct a shared illusion, within which they construe their actions. The illusion may not be true, but this is not necessarily done with the intent to deceive. Rather, they represent what can be, a subjunctive reality. Performance of ritual shows acceptance of its conventions, regardless of one's actual opinions. In contrast, sincerity requires internal conviction reached after genuine consideration, where one must literally mean what they say and do for their actions to be sincere. Seligman also raises an important caveat: as our expression of sincerity occurs through language and social conventions, we can never fully express our inner selves. Even our private thoughts are filtered through language, thus we can never know for certain that we are being sincere, even to ourselves.

It struck me that many of the actions I had construed as performances in my initial analysis were rituals by Seligman's definition. For example, my language patterns with friends create an illusion of amicability and equality, as compared to the more polite conventions I employ with teachers. These distinctions outline the hierarchies between individuals. Therefore, an analogous relationship appears between ritual and sincerity, and performance and non-performance, where interpretations of rituals and performance go beyond their superficial meaning, and sincerity and non-performance are ideally wholly genuine. Building on this, Seligman's idea of the uncertainty of sincerity limits our ability to distinguish performance from non-performance: It might be possible to confirm that we are performing, to know of our pretense. While trying to ascertain the absence of pretense, however, that very train of thought is a conversation with our own inner voice and it becomes cloaked in a new layer of uncertainty to be dissected, creating a never-ending cycle. Essentially, as our thoughts are mediated by language, a social convention, it is impossible to verify the absence of performance. Thus, while we can confirm performance, we cannot deny it.

At the intersection of the two texts, there are areas where they build upon each other, and others where they diverge, likely owing to their different subject matter. Where Osipovich's (2006) requirements for performance implicate the awareness of pretense, Seligman's (2009) performance-like rituals can be performed without awareness. Additionally, Seligman's perspective expands Osipovich's binary between awareness and its lack, introducing a gray area in which we cannot be certain of our sincerity. The audience cannot know of pretense without objective evidence, and we ourselves cannot deny pretense, our true identities mysterious to our conscious selves. Although awareness might be dichotomous in theatre, gray areas still exist when applying Osipovich's definition to reality. Maybe in this gray area lies a sincere sort of performance, comprising interactions not always without pretense, but certainly without its clear intention. When I reflect on my countless interactions with others, this seems to be a fitting way to describe much of them. I might be playing a role outwardly, but in my mind, I am simply playing myself, although whether or not that self is truly me is something I cannot say for certain.

Thus, the answer to my question is not clear-cut. However, in considering it, I have grown cognizant of not just the sincerity and pretense of everyday communication, but also the ambiguities characterizing human interaction, even those that spring up in conversations with myself. If I meet that elderly man again, perhaps I will thank him for the insight his actions provoked in me. Although I might never know for certain if my gratitude is sincere, I will still try my best to make it so.

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CC0001

People with Albinism in Asian Society

· **Eileen Paw Zhang Hui** ·

When I was young, I noticed differences between my father and me, particularly his fairer skin and whiter hair, which always made him stand out from the crowd. However, I only fully understood his condition once I learned about albinism, a rare genetic disorder that results in a lack of melanin pigment in the skin, hair, and eyes, when I studied the chapter about gene mutation in my Senior 2 Biology Textbook.

Besides the incurable sight impairment brought on by albinism that causes him numerous discomforts in daily life and becomes the most significant obstacle in his educational and career paths, his unusual physical appearance has caused him to struggle to develop a sense of self-worth. Living in a society where most people possess yellow complexion and black hair, he frequently draws stares wherever he goes. Being different from others does not spare him from receiving derogatory labels. He experienced verbal and physical bullying as a child while being shunned by his peers. Due to the general public's ignorance of albinism, people frequently mistake people with albinism for being elderly and are skeptical of the races they claim to be. Like other albinos, he struggled with low self-esteem due to the perception of others that he was unworthy and encountered trouble blending into society. “My life lacked purpose and I felt extremely unhappy at that time.” Fortunately, he could accept his limits and overcome the traumatic early life experience.

People with albinism are more likely to experience stigmatization and physical and social violence in non-white communities than in white communities, where they are less distinguishable from other community members. As a result of the advocacy of fundamental human rights of people with albinism conducted by albino social activists, the increased awareness of this genetic disorder in Western and African society has prompted the establishment of several global or national non-profit organizations to provide people with albinism with social support. However, in the Asia region, where the percentage of them is low, and the mentality of people is conservative, people with albinism often find themselves isolated from society. Moreover, due to the collectivistic nature of most Asian cultures, individuals are more inclined to identify with their ingroups and exhibit bias toward outgroups, which in this case, are albinos. This raises the question: How do the prejudices that people with albinism in Asian society experience depend on the differences in skin tone between them and others in the society?

Mswela and Nöthling-Slabbert (2013) explore topics related to prejudice towards people who have albinism against the background of colorism, which was first defined as "prejudicial or preferential treatment of same-race people based solely on their color" by Alice Walker in her 1983 book, In Search of our Mothers' Gardens. Mswela and Nöthling-Slabbert argue that "discrimination against people living with albinism should be possible based on color as a prohibited ground, independent from race or ethnic considerations." In Africa, skin tone has historically been an instant tool for identifying race and ethnic differences. According to Mswela and Nöthling-Slabbert (2013), the definition of a black person and a white person in Section 1(1) of the Population Registration Act, which is strongly determined by appearance, suggests that color and race are inseparable. In the case of people with albinism, their skin color, a common feature of racial classification, is distinct from others of the same race. This, together with the myths, stereotypes and negative connotations linked to their pallor in those from non-white communities, subjects them to intraracial skin color discrimination.

Although the article focuses on the circumstances in South Africa, Mswela and Nöthling-Slabbert's view can also be used to interpret the situation that people with albinism in Asia face since there exists a significant contrast in skin tone between them and others. In Asian society, where a high level of skin tone bias exists and complexion remains a dominant part of racial identity, their ashen appearance subjects them to a broad attitudinal dimension of prejudice, ranging from being mistreated to being ostracized. In my father's case, he was denied access to medical insurance and allowed to purchase only 150000 Malaysian Ringgit worth of life insurance, as people with albinism are thought to be more susceptible to illnesses and accident-related death. In an interview by Real Talk MOSG, a Singaporean albino claimed that his first employer did not pay him for around three months of work as he was hired out of pity. These examples show that people with albinism can be perceived as low-status groups in terms of colorism, where one's social standing is established by the social meaning attached to one's color since their abilities and values are frequently minimized by others. However, Mswela and Nöthling-Slabbert fail to explain the formation of the social connotation of skin color, which can shed more light on society's psyche behind such morally inappropriate behaviors.

Wan (2003) provides a constructive insight into the reason behind the pervasive stigmatization of people with albinism due to their unconventional appearance by referencing Goffman (1963). She concludes that their visual impairment and skin color are “abominations of the body” that will provoke immediate negative assessment from others. However, the former is a characteristic hardly recognized at first sight, whereas the latter provides visible evidence of stigma. "The more prominent the stigma, the more likely it will affect the individual's social interactions" (p. 281). Therefore, "people with albinism are discredited as their physical differences are readily apparent to others" (p. 282). She believes that human's innate fear of an unknown condition is the major contributor to prejudice. Supported by Sontag (1979) 's view that “Certain physical characteristics elicit fear because the aetiology of the attribute or disorder is unknown, unpredictable, and unexpected,” she states that due to the unfamiliarity of albinism, people with albinism are marginalized by societies.

The varying levels of stigmatization that people with albinism experience around the world are eloquently explained by Wan (2003). The more "visible" albinos are in the regions, the more hostile others' attitudes toward them. People with albinism in Africa face the greatest living challenges as their lives are even threatened due to the prevailing albino trafficking for witchcraft. As the proportion of them is small in Asia where the majority of the population has brown or yellow complexions and they are noticeable in the crowd, widespread misconceptions about albinism, such as the idea that it is an infectious disease and curse as the result of lack of knowledge among general public lead to social exclusion toward them, as they are often seen as inferior, punks, aliens and foreigners by others. My father and my uncles were referred to as "white hair guys" when they were teenagers, and even now, as adults, they are still likely to be called that when someone unfamiliar with their circumstances approaches them. From Wan's (2003) perspective, the reason behind the exclusionary attitudes is the aesthetic aversion towards people with albinism as their appearance deviates from the specific notions of the so-called "normal" physique and the general lack of awareness about their health situation.

While Mswela and Nöthling-Slabbert (2013) tend to justify the phenomenon from a societal perspective by introducing colorism, Wan (2003) focuses on how the visibility of defects one possesses would affect their daily interpersonal interactions. Wan's analysis, which provides insight into the psychological principles that guide human behavior, complements Mswela and Nöthling-Slabbert's thesis, which paints a broad picture of how systematic discrimination occurs. What could be a more fundamental reason underpinning these views, is the human nature that causes us to exclude people who are different from us from our social groups by alienating and distancing them. To avoid the suffering of oppression and discrimination, people with albinism may choose to conceal themselves by shunning social situations. Some of them, who have family members as a constant source of support, tend to develop healthy coping mechanisms. They perceive their condition as their uniqueness rather than a limitation. The attitudes of various Asian communities toward people with albinism varied noticeably. According to my observations, more educated and open-minded communities tend to have more positive attitudes toward people with albinism and are more inclined to accept their presence in their social groupings, even though they may initially be startled by their looks. Although their appearance may make us feel uneasy initially, we should accept their differences and respect them. Despite their physical imperfections, they are people like us, and their fundamental human rights should also be upheld.

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Stillness In a Volatile World

· Goh Xiao Ni ·

My shoe soles scraped against the asphalt ground as I slowed to a walk. Inhaling deeply in a bid to steady my labored breaths, I felt the cool morning air rush into my lungs, carrying with it the scent of freshly cut grass and soil. The heat in my calves and hamstrings slowly dissipated as dopamine rippled through my body. Completing a 5km run in the morning brought me a ray of happiness, just as the first rays of sunlight lit up Lower Seletar Reservoir Park.

Those hoping to capture a photo of the sunrise walked along the wooden boardwalk of the Heritage Bridge—a jetty designed to look like *kelongs*, old-fashioned fishing platforms on stilts. At the picturesque pavilion, a group of yoga enthusiasts flowed from the downward dog to the cobra pose, their movements fluid and purposeful. Fishing enthusiasts clad in t-shirts, cargo pants, arm guards and bucket hats occupied various spots at the jetty, casting their rods in hopes of scoring a catch. A group of cyclists, wheel length apart, pedaled in unison along the park connector. Another group of ladies occupied the space next to the Bioswale Rain Garden and danced to lively music. Lower Seletar Reservoir Park brimmed with life as people went about their morning activities.

Amidst all the bustle, I noticed a lady sitting on a big rock by the reservoir bank under the Mass Rapid Transit (MRT) tracks. She sat still with her eyes closed, legs crossed and spine lengthened, her hands resting loosely on her knees. Dressed in a simple white t-shirt and black shorts, nothing about her should command my attention. Yet I was transfixed. Even as the MRT rumbled past loudly on the tracks above her, even as cyclists sped past behind her, the sharp ring of their bicycle bells cutting through the air, even as drivers on Lentor Avenue blared their horns at another driver attempting to change lanes amidst heavy traffic, she remained in her state of tranquility. How could she remain as still as a pond with no ripples with all the activity around her?

At a park where everyone was engaged in some sort of physical activity, her stillness stood out—more so than the neon orange dri-fit t-shirts worn by the cyclists, more so than the loud Zumba music being blasted in the distance, more so than the pungent smell emanating from the sweat-soaked runner jogging past me. Her stillness was almost incongruous with the park; simply meditating, simply being there, did not seem right.

Society has conditioned us to value productivity and to be constantly on the move, so much so that we carry this notion even to green spaces. Running, cycling, dancing, kayaking—even at a park, the seemingly correct way to relax and relieve stress was by being on the move. In various aspects of modern-day life, action often takes precedence over stillness.

Stillness, thought to be associated with low productivity, low performance and low returns, has become an undesirable state in a world that desires more output, more progress and more gains. This begs the question: What is the meaning and value of stillness in Singapore society today?

In his book *Stillness is the Key,* Holiday (2019) challenges the traditional definition of 'stillness.' Instead of simply being the absence of movement and sound, Holiday redefines 'stillness' as the ability for one to remain focused and calm regardless of the circumstances. When the pace of life was slower and things were simpler, it was reasonable that stillness just meant putting a halt to whatever we were doing. However, the meaning assigned to words may change as the context surrounding the word evolves. In the current world which is ever-changing and full of distractions, the traditional definition of 'stillness' has become obsolete; it is difficult and impractical to promote simply not doing anything. In a world that is constantly moving, it is more relevant for stillness to mean focusing on the single task at hand. In a world overloaded with information, it is more realistic that stillness meant focusing on processing just one piece of information. Rather than regarding stillness simply as a motionless and tranquil state, Holiday views stillness as the capability to remain steady and sensible. Holiday's contemporary definition offers a new take on stillness that Singaporeans can reference when assessing its value and when adopting it. On top of redefining 'stillness,' Holiday also argues that "[t]he insights we seek are often buried and rarely obvious–to find them, we need to be able to look deeply, to perceive what others are unable to" (p. 80). That is, through activities such as journaling and reading, which are considered acts of stillness under Holiday's broader definition, we should carry out reflection and gather insights so that we can connect the external world with our inner selves and derive the answers that we seek.

In her TEDTalk "Stop trying so hard. Achieve more by doing less," Butzer (2018), a lecturer at the University of New York in Prague, posits that we should learn to engage in "downstream effort," a type of effort that yields desired results more efficiently. Just like rowing a boat along with the currents, this type of effort is less laborious and demanding but still yields the same outcomes. Butzer argues that "[w]e need to engage in some inner work in order to begin to cultivate downstream effort in our lives" (2018).

Engaging in "inner work" is an act of stillness in itself. When we engage in "inner work," we make attributions to various situations and outcomes. In doing so, we intentionally slow down to focus and reflect on ourselves. This heightens our self-awareness, which is integral for improvement—only when we reflect on the past can we recognize our strengths and weaknesses, identify what worked and what did not, and subsequently perform better. As such, carrying out "inner work" to "downstream" our efforts is essential as Butzer posits. However, self-reflection seems to have taken the backseat to peer evaluations and performance reviews in modern-day work settings. We rely heavily on feedback that others provide and external factors such as performance indicators but fail to set aside time to process them. As such, we neither internalize nor evaluate these factors, hindering us from working at our best. Stillness and reflection can aid us in "downstreaming" our efforts—we think of better ways to do things, we notice and utilize the resources at our disposal more effectively, and we create better systems to reduce redundancy—thus improving efficiency and improving productivity. Additionally, engaging in “inner work” also promotes stillness. After we recognize ways to “downstream” our efforts and process feedback through such self-reflection, we are able to get more done in less time. This then gives us more time to ourselves which we can then use for self-connection and reflection, allowing for a virtuous cycle.

On the treadmill of life, Singaporeans keep running faster and harder in a constant effort to achieve more. While it may seem as though stillness has taken a backseat to productivity, both productivity and stillness are not mutually exclusive. Butzer proposes that people engage in “inner work” to achieve more efficient outcomes at work and Holiday suggests ways of practicing stillness by redefining it as the adoption of a mental state that focuses on the present. Both authors acknowledge the merits of stillness and emphasize self-reflection as a tool to improve productivity.

However, Holiday (2019) and Butzer (2018) do not examine how people may face constraints that prevent them from practicing stillness. While redefining ‘stillness’ makes it easier for Singaporeans to incorporate acts of stillness in their daily lives and recognizing the value of stillness in modern-day society may motivate more people to make a consistent effort to adopt this state of mind, the mere redefinition of stillness or recognition of the value of stillness is neither sufficient nor meaningful if Singaporeans are unable to put stillness into practice. Practicing stillness is worthwhile but it may remain difficult for many due to various circumstances. For instance, practicing stillness through introspective activities such as reflection requires high effort but releases little dopamine, the hormone which gives us a sense of pleasure. Conversely, engaging in stimulating activities such as scrolling through social media requires low effort but releases high amounts of dopamine, which then motivates people to continue with such activities. This physiological reason makes it easier to engage in distracting miscellaneous tasks rather than conscientiously practice stillness. Social factors such as entrenched workplace cultures and the negative labels associated with the traditional definition of stillness also hinder people from putting stillness into practice in a modern-day setting. As such, there is a need for Singapore society to redefine ‘stillness’ and recognize its value, especially in the workplace, such that we can foster an environment that promotes, rather than disparages, stillness.

Just as a runner would schedule rest days to recover and optimize training performance, moments of stillness are necessary for us to perform better. Just as a runner would review their running form and training statistics to improve, we need self-reflection to grow as individuals. Nonetheless, the runner may not always be able to follow their training schedule and go for a run due to bad weather, physical discomfort or last-minute commitments. Similarly, Singaporeans may not be able to practice stillness due to various factors. Some of these are institutionalized and difficult to overcome while others are within our control. Regardless, circumstances that hinder stillness and reflection will always exist and we should strive to overcome them, both individually and collectively, so that we can reap the benefits that ‘stillness’ has to offer in this volatile world.

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A Crisis on Community

· **Tahamina Abdul** ·

It was overwhelming in the morning. Maybe it was the shock from the glare of the fluorescent lighting, or the cold air drifting through Raffles Place Mass Rapid Transit (MRT) station. Or perhaps it was the raucous cacophony of Oxford shoes and high heels clacking on the polished linoleum floors coupled with the continual beeping of the MRT gantry as a seemingly perpetual outpour of men and women, clad in business attire, began their Monday. But if you listen closely, amidst the bustling sounds of an otherwise mundane morning, there was a pin-drop silence. The ambiance was mechanical, devoid of a hubbub of conversations about the week ahead. Rather, it was saturated with a brooding, insurmountable sense of urgency that made its way into the pit of my stomach. Everyone had somewhere to be and something to do as they feverishly rushed out of the MRT station like chickens with their heads cut off. In their haste, no time was spared, not even for conversation. But I think it was just me, because everyone else was unfazed. It was just another Monday for them.

Raffles Place is the heart of Singapore's Central Building District, the city-state's primary commercial area. As the hour passed, tranquility finally settled in and the waft of urgency around me scurried into the buildings and skyscrapers lining the streets. The workday has begun.

Figure 1. A crowd at Raffles Place after lunch.

As the afternoon heat became palpable, so did the inherent urgency. Everybody had the same hour—three thousand and six hundred fleeting seconds to source their sustenance. Corporate jargon resonated through restaurants as meetings took place over lunch. Was it lunch hour, an hour to unwind, or work-while-eating hour?

A profound cognizance came over me—I was not observing a community. The word 'community' is derived from the Latin commūnitās and translates to joint ownership (Dictionary.com, n.d.). A community is a self-governed site of shared decision-making, and it is dynamic and self-sustaining in nature. Rather, I was watching people operate in silos. I saw, with my own eyes, the word 'fast-paced' define itself through the corporate landscape. Everything was structured around maximizing productivity. And any semblance of human connection was superficial and transactional: merely people using people in the grueling, Sisyphean pursuit of climbing up the corporate ladder. Community is the muscle that has been strategically atrophied by a culture of competition.

In 1969, Lee Kuan Yew infamously proclaimed, “Poetry is a luxury we cannot afford”. Though this was amidst Singapore’s early nation-building, the paradigm nevertheless reverberates, perhaps even more forcefully, in our current cultural climate. Poetry, which has for centuries annealed communities by translating humanity’s most intimate inner turmoil into the written word, is now too frivolous. It has no economic capital, nor does it serve a pragmatic function. By extension, it seems like forging meaningful interpersonal relationships or community, high on social capital, could be a waste of our time. In abandoning communities for a pursuit of ‘happiness’ based on material success, we lose our humanity. Our intrinsic need for social connection is one that cannot be replaced, and hyper-individualistic capitalism has only worsened our overall well-being. Communities give us the priceless: hope, and a shared vision of a better world. So why should community be a luxury that we cannot afford?

This has not always been the case for Singapore. The ‘kampong spirit’ has been revered as a consequential part of Singapore’s heritage. We were once a nation built on an immovable sense of community and solidarity—how did we end up here? Georg Simmel, a nineteenth century sociologist, answers in his widely-read essay, ‘The Metropolis and Mental Life’ (1903). In his observations comparing rural communities and cities, Simmel noted that the metropolis is characterized by ceaseless and erratic stimulus, which drains its inhabitants of their energy. The need to be able to adapt to perpetually changing circumstances leaves no time to engage with one’s emotions, breeding a blasé attitude. Rather, one establishes a relationship with the impersonal: money. The fungibility of money reckons “with persons as with numbers... which are of interest only insofar as they offer something objectively perceivable” (Simmel, 1903, p.12). This cold indifference, when incentivized by a profit motive, reduces everything, including interpersonal relationships, into a mere transaction. This is not a moral failing, but rather an evolutionary response to a constant barrage of stimuli. However, Simmel’s outlook is optimistic as he argues that it is a necessary trade-off, as money liberates people from the confines of commercial life, giving one freedom during their leisure time.

This might have been a reasonable trade-off to Simmel, who lived during the early 1900s, when the early stages of capitalism ushered in unprecedented economic prosperity. Perhaps Simmel envisioned a better world, a world now dismally rife with social friction. How can money provide liberation, when Singaporeans are clocking longer and longer hours? Money, rather than being a means to the end, is the end itself. The blasé attitude in Singaporeans is further exacerbated by fierce, unrelenting competition and technology-facilitated disconnection, insofar as its calculative exactness and rapacious need for material survival is ubiquitous in Singapore. Blasé impedes compassion, through which a shared humanity can be found. Thus, social alienation is inevitable as communities are reconfigured into profit and product-driven commercial networks. Then, perhaps community *is* the price Singapore has paid for our burgeoning from the humble *kampong* to an Asian Tiger.

In his essay, 'Capitalism Subverts Community' (2022), Robert Neuwirth refutes such nihilism. He postulates the existence of two functioning economics active in the world, with the dominant being the glitzy 'top-up': the economics of competition and asymmetrical power, and arguably the economics of the metropolis. In line with Simmel's conclusion, there lies a cancer in its heart: "the incompatibility of individual profit and general welfare" (Neuwirth, 2022, para. 28), which costs us community. The answer to this conundrum lies in the not-so-glamorous and often undermined 'bottom-down' economics: the economics of the global working class, where community finds itself serving an unprecedented economic purpose. An example is AgFirst, a community cooperative dedicated to helping socially disadvantaged farmers by pooling resources and splitting costs. It allows farmers to keep their land and reap individual profits, enabling them to compete with the larger agricultural arena. The economic gains of a cooperative are secondary to its primary aim: to nurture a sustainable community, in which people collectively join their minds *and* hearts, to move forward in a tumultuous world.

Cooperatives provide a pragmatic optimism in which community is not doomed in the pursuit of economic growth, but rather, repaired and nurtured: a stone left unturned in Simmel's essay. That is not to say that Neuwirth's conclusion relegates Simmel's arguments, as the blasé attitude is pervasive in the 'top-up.' But cooperatives can aid in delaying our collective descent into the blasé and its inherent erosion of community. I write delay, rather than derail, because ultimately, cooperatives are still competing with large-scale corporations in the 'top-up', and it is dubious whether they will survive the sacrilege of an existing capitalist economy. Even in Singapore, cooperatives such as ComfortDelGro and NTUC Income are corporatizing (Tan, 2022). Nevertheless, the cooperative is still a small but nascent oasis in a larger capitalist desert that should not be overlooked.

In physics lies a distinction between accuracy and precision. While precision describes how close a value is to other values, accuracy is defined as how close a result is to its true value. Both Simmel and Neuwirth argue on the basis that it takes time and labor to form a community, a labor which without any economic gain, is unjustifiable by the profit motive—a farcical game of precision. Rather, a commūnitās is intrinsically antithetical to capitalism: our shared humanity and compassion directly challenges the selfishness of the blasé attitude. Amid the aftershock of COVID-19, an increasingly competitive economy and looming ecological doom, perhaps the most radical and *accurate* action we can take is a page from the book of our past: the kampong spirit. The only way forward in today's volatile world is through fostering communities through which we can envision a new Singapore. After all, what can we afford, if not community?

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Colouring Outside the Rainbow Lines

· **Ryan Nicholas Aw Jun You** ·

The place was teeming with people, mainly men. Some were wearing outfits so loud you could almost hear the colors through your eyes, some were almost half-naked, trying to show off something they had been building in the gym for the past few years. Red rough stone walls illuminated by flashing disco lights. Trying to order a drink made me confused if the bar top was wet or was it just the wet back of the man pressed up against me. Stepping outside for some fresh air, the scent of cigarette smoke blindsided me – acrid, bitter tar and some other chemical became increasingly intoxicating. Raucous laughter filled the air as the latest gossip of who had sex with who, and who got cancelled got passed around as if it were the communal hookah that they were all too hooked on to. This was what queerness felt like.

Or was it?

"While I do identify as a gay man, I think it is very difficult to relate, or to connect to the wider queer community in Singapore. It is a very specific brand of queerness that is more accepted, it is one that feels very alienating to me, personally." The LGBTQ+ community reclaimed queerness as an act of rebellion to challenge societal hegemony on heteronormativity. However, fault lines within the community have begun to, or already have begun to set in. "A lot of spaces feel very Chinese-male centric…[many] queer spaces that I have seen seem to cater more towards a middle, upper middle, and upper class [sic] group of people. As someone from a working-class family, I can't resonate with that." Max is an Indian man in his twenties in Singapore. Unapologetically brown, he describes how "among gay people, the moment you are brown and queer, you are occupying two marginalized positions." The dual marginalization is a position that lets people like Max find themselves at odds with parts of their core identities.

Max faces conditions that he cannot overcome for his inclusion into the queer community, which begs the question: even in a community of castaways, why are there conditions to inclusivity?

This conditional inclusion is not readily observable if you are not situated in the shoes of the non-majority. Sinisterly, marginalization compounded on itself is a reality silently faced by a not insignificant portion of the queer community, where respite is usually ephemeral. "You can be too queer to be accepted by the brown community, and you can be too brown to be accepted by the queer community." For Max, making either house a home is like squeezing blood from a stone.

Writing for the *Race, Gender and Class* journal, Harr and Kane (2008) point towards inherent power structures within society that permeate into every facet of society, even into the LGBTQ+ community. Race and class are major defining factors as to how a queer individual is able to align with the queer agenda; class stratification precludes those lower on the strata from partaking in forming a queer identity (Ibid). "Many queer people of color have encountered overt forms of racism in the gay and lesbian social movement…the creation and emergence of a gay collective identity was linked to a middle-class conceptualization of homosexuality" (Harr & Kane, 2008, p. 285).

Harr and Kane (2008) point toward the concept of queering politics, which can also be understood as intersectionality. The construction of a gay collective that is distinct from heteronormativity is through the queer identity, but the worry is that the identity used will start to exclude those of a different race and class. This is an interesting double-bind, as those who are queer but bear a different skin color and financial ability would not be regarded the same by those who fought to liberate their community based on the identity of same-sex attraction. So where do they go? Where can they find refuge and where can they finally belong?

Carin Taylor speaking at a TEDx Talk asked what it meant to belong. (TEDx Talks, 2022). Belonging is more nuanced than simply being included and having a diverse space. Taylor, as a Black woman in the United States recounted her own experiences with inclusion and diversity, and noting often how she, as a minority, had the tendency to dismiss someone's identity and assumed that they simply did not belong, only to find out that their diversity was just invisible.

Taylor talks about giving the power back to the individual – instead of being subservient to the existing power structures, Taylor asks, why do I not insist on making myself belong? But this ability does come with the precondition of knowing yourself, as she puts it succinctly, "You must know who you are as an individual in order to articulate what makes you have a sense of belonging" (TEDx Talks, 2022, 00:06:21). Granted, you would need to be able to achieve what Taylor coins as the five basic conditions in any setting to be able to belong: psychological safety, empathy, acceptance, connection, and being embraced (TEDx Talks, 2022). Taylor hinges on the human element of belonging. More than the institutions of race and class, there's this underlying current of compassion and humaneness, characteristic of cultures all around the world.

It is apparent to note that these two theses presented help us to confront the conditions to inclusivity in two perspectives: Harr and Kane present a structural understanding, and Taylor brings forth a more cultural breakdown – where one sees barriers to inclusivity through established and institutional barriers, and the other more optimistic in human connection triumphing. Perspicuous in their difference, Harr and Kane supplement with empirical observations, while Taylor engages more normatively, possibly missing the mental hurdle that is faced through the quotidian experiences of the structural reasons. However, the underlying commonality here is in the acknowledgement of intersectionality assessed through different lenses.

The tension that needs to be resolved here – how much power can one individual have in the face of structural prejudices? Without the five basic conditions prescribed, individuals are practically unable to reclaim their sense of belonging. But, while it seems that the structural reasons have a monopoly on our understanding of the conditions to inclusivity, there is a link that needs to be brought forth: people create culture, culture informs societal structures. The structural explanations originate from cultural phenomena. While a single individual cannot stand against an institutionalized system, with others beside them, there is strength in numbers. Taylor's five basic conditions – especially of connection – rings true here; we cannot undermine the impact of genuine and affirming connections which have the power to alter systems of injustice and exclusivity.

When engaging in the queering of politics, there is a chance to step away from what is perceived to be "normal" in society and confront what we can do better – we do not have to adhere to the institutions taught to us; rather we are free to engage in our humanity when confronted with the sway of such systems. It is not an immediate turnover, but by questioning the institutions, there is already a step to bridge the cultural and structural explanations and exerting the effort to use both in tandem to bring down the conditions to inclusivity. The worry comes when we observe how far these structures go back in history, and how they have been informed by generations of racism and classism.

Herein lies the problem, sectarianism stretches into every facet of society such that we see each other through our labels and act accordingly. Realizing that you can take the power of belonging back is a privilege awarded to those who have soul searched and realized their worth. It is so easy to say "you should insist that you belong," but in practice can you truly do it? What needs to be done is a total revamp of how we view each other. More than the gay community, as a society we ascribe so much value to the superficial markers of an individual. Sure, knowing if someone is gay or straight, Malay, or Chinese and whatever other identifier informs us on the basic information of the person – but people are more than that. People create culture, culture informs the institutions of society. It is not impossible to perceive our peers as wholly human, rather than emphasizing what they are, and how much difference we have between our natural selves. Structural and cultural explanations are good starting points to understanding why we have conditions to inclusivity, but as a species we have to start recognizing that these are just reasons to help us see a bigger picture. Once we start seeing each other as fellows of the same species, there can then be a hopeful first step to bringing down these conditions to inclusivity.

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address in public. Knowing that people like him exist gives me hope that we stand a chance to bring down these barriers.

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CC0001

Identity Evolution:
Bharatanatyam Through a Modern Lens

· **Laura Terese Raj** ·

Figure 1: Photo taken at Singapore Indian Fine Arts Society (SIFAS), Singapore

Dance class is my weekly immersion into my roots. Every Saturday I head to the Singaporean Indian Fine Arts Society (Figure 1. SIFAS) and enjoy a well-deserved break from a mentally exhaustive week of school. As I put on Indian ethnic wear: *churidar* (Indian top), *dupatta* (a shawl), and a *pottu* (dot on the forehead), my traditional identity is uncovered: a part of me that seems so distinct from the identity I embody otherwise. 'Bharatanatyam' is an ancient art form that allows me to transit into my cultural realm from the modern outside world. Every class starts and ends with the 'namaskaram' which is a prayer where we thank God, our teacher, and the earth for their blessings. With the rhythmic beat that elicits from the striking of a wooden stick against a wooden plank (or a 'thattu kazhi'), we begin to dance. The traditional ambience is at its peak when we pose as 'Lord Nataraja', the God of dance. The surrounding polyptychs and depictions of 'Lord Nataraja' serve as a reminder to pay homage to him by emulating his power and grace in our dance. The miniature shrine set up in the corner of the room is symbolic of the spiritual core that this art form requires you to connect with.

After an hour of our feet hitting against the wooden floor, the subtle smell of our sweat drenching our churidars blends with the smell of burning incense from the shrine. The satisfaction of having a good session, mingled with light-hearted laughter to my teacher's witty jokes, overpowers the fatigue that seizes our bodies. Time and again, we are humbled by how much self-discipline it takes to practice this art. Dance class is an indulgence in a core element of my cultural identity and expression. It makes me appreciate the value of representing my roots and is much more than just a weekly unwind. The emotions kindled by the traditional song that we dance to is a rejuvenating reminder of this part of me.

Growing up in Singapore has allowed me to explore both a traditional and a modern aspect to my identity, and I slowly began to realize the ways in which they can complement each other. Bharatanatyam is not merely the movement of our limbs, but it is a form of storytelling. Every expression, step and gesture play a role in communicating the intention of a certain character to the audience. Empathizing with characters, in expressive choreographies, is necessary to truly capture and channel their emotions. This has undoubtedly shaped my interactions in the modern world by training me to observe the nuances in situations while forming deeper connections. I have learnt to respect other modern art forms as a result of knowing first-hand the effort that goes into mastering it. Moreover, the quest for perfectionism through consistent improvement is paralleled in both Bharatanatyam and modernity. This interplay of traditionalism and modernity makes me question: How does identity evolve as a result of immersing oneself in tradition while living in modern Singapore?

Identity is dynamic and its construction is accommodative of more than one culture. Seconde Nimenya's TEDx talk (2016) explores the unfolding of her bicultural identity as a consequence of her journey, during her early years, from Burundi to the West. Experiencing numerous cultural settings motivated Nimenya to become a recognized advocate for cultural diversity and inclusion. In her speech, she describes the gradual subduing of her cultural roots and the diminishing appreciation of her defining characteristics including her accent and skin tone as a result of adapting to the western culture. She soon realized that suppressing her origins and associating her cultural uniqueness to the feeling of embarrassment denies one of their "self-worth and identity" (TEDx Talks, 2016). Her subsequent resolution was to create a bicultural identity which allowed both her Western and African cultures to co-exist, without losing the value and importance of either one.

Nimenya's thoughts are mirrored in many Singaporeans today, as they struggle to pay homage to their culture in the face of modernity. It resonates with a conflict familiar to many youths that arises from the apparent need to choose or prioritize one culture over the other. However, defining or limiting ourselves to only one culture is not necessary, and it undermines the fact that identity is dynamic and flexible. By making a choice between which culture is more relevant or important to us, we inevitably set ourselves up to 'let go' or 'understate' either culture that we belong to. With Bharatanatyam becoming an increasingly important aspect of my life, the futility of separating my two identities became evident. Picking the 'traditional' over the 'modern' part of me is not a precursor to creating an identity and is not representative of who I am. In the wider context, evolving into a bicultural identity allows us to appreciate the specificities of both the traditional and modern culture while also providing a deeper, refined outlook on one's surroundings. "The need to be accepted for who we are" (TEDx Talks, 2016) without losing sight of our culture(s) is an essential aspect of human nature that is safeguarded by a bicultural identity.

David Brooks (2022), an opinion columnist at the *New York Times*, explores why modernism is typically seen in direct opposition to traditionalism in his article. He describes how the concept of modernity supposes that as nations develop, they strive to imitate and become more like western countries. While this promises an optimistic vision of a world united by one common (western) culture, it undermines the effort to protect individual cultural identities that countries strive to preserve. Humans are driven by the need for their cultural identities to be "seen, respected and appreciated" (Brooks, 2022, para. 14). In the face of modernism, this is often overlooked. Brooks concludes on the note that because modernism promotes westernization, it threatens the importance of cultural values.

Modernity presents a dilemma of creating a "homogenous culture" (Brooks, 2022, para. 26). The instruments provided by western cultures, such as a common language, are merely means to create intercultural connections. Building upon Brooks' ideas, this homogeneity arises because we often allow these features to dominate and subsequently threaten our own cultural uniqueness. This scene is not foreign to a Singaporean context that idolizes contemporary values often at the expense of our ethnic heritage. Since modernization implies westernization, Singapore's efforts to preserve culture, with institutions like SIFAS, are often undercut. This makes me value the concept of biculturalism and the opportunity to keep in touch with my culture through Bharatanatyam. Nimenya's ideas are a reassurance that our cultural identity can still be preserved in a modernized world proposed by Brooks. By assuming an upper hand for 'modernity' we may neglect our cultural identities and compromise our traditional values. Drawing the line between succumbing to western influences and defending cultural principles is a key reflecting point while shaping my own identity. Bharatanatyam has allowed me to keep in touch with my Indian cultural values while living in a modernized setting and has created an identity whereby both the traditional and modern aspects of me thrive.

While Brook proposes a theoretical rationale to the question and Nimenya demonstrates a first-hand experience of an identity transformation, they both appeal to the intrinsic need to belong and be accepted as ourselves in a modernized world. The transformation of my identity is supported and validated by their observations. Living in an increasingly modernistic Singapore, I am even more determined to protect my bicultural identity and a sense of self through Bharatanatyam. The biggest takeaway from my journey is that ultimately, we have the power to shape our identity in any way we want, without limiting ourselves to only one culture. Through this essay, I hope to share the awareness and invaluable lessons that I have gained from creating an identity that merges my roots with modernistic values to other Singaporeans navigating the contemporary world. Today, I can say with pride that my identity has evolved to become holistic and multifaceted, as a result of immersing myself in 'tradition' while living in the 'modern' Singapore.

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CC0001

Vice and Religion: Allies or Adversaries?

· **Chua Boyu, Daniel** ·

My clothes clung onto my sweat-drenched body as perspiration began to bead on my skin from the scorching heat. The air hung heavy with a stifling lethargy, draining every ounce of energy from my weary body. Every step I took felt like wading through a thick, sticky soup of humidity. Time seemed to slow down here at Lorong 12 Geylang. It was a typical weekday afternoon: the narrow one-way street was choked with rows of vehicles, some with their wheels overlapping onto the cramped footpath. Sandwiching it were shophouses, budget hotels, religious institutions, and even a gym. The few brave souls out and about were moving at a snail's pace: their movements sluggish and deliberate. Closing my eyes, I could hear the whirring of construction machinery, delivery trolley wheels creaking against the gravel, and the leisurely shuffling of footsteps. Then, the woody aroma of burning incense caught me off guard, along with dust from nearby construction sites and exhaust fumes that assaulted my nostrils. A tourist, repulsed by the elements, grimaced, and scurried across the road, and sought refuge in a hotel. Yet, the locals appeared unfazed.

Approaching the gates of the Chinese temple - Lin San Temple, the scent of burnt wood emanating from a metal joss-stick urn greeted me. The building stood out among the dilapidated shophouses: its exterior was vast, spanning the width of 5 shophouses, and it had a clean and sleek modern design. Its facade comprised vertical strips that appeared almost like an optical illusion that camouflaged the inner structure. Next door stood Jamiyah Islamic Centre. It featured more traditional architecture, with a dome and a prominent minaret. Its exterior was adorned with intricate geometric patterns and a tall glass entrance. The light-beige painted walls had seen exposure to the elements and age, giving it a weathered appearance. Yet, they were soothing to the eyes.

Just a shouting distance away stood several terrace-style houses that I gravitated towards. Compared to the other buildings, they looked “professional” with whitewashed exteriors, shuttered gates, and translucent glass doors. “Why do they look so different?” I thought to myself. Suddenly, a scantily dressed woman wearing high heels, her face clad with heavy makeup and a melancholic smile, nonchalantly exited the compound. It then dawned on me - the “houses” were the infamous brothels. Sensing countless pairs of glaring eyes already keeping tabs on me, I trailed away cautiously, not to gather any more attention.

Geylang has a storied history and an infamous reputation as the red-light district of Singapore. On the contrary, Singapore has strict laws aimed at curbing vices. The coexistence of brothels near religious institutions is a striking juxtaposition, as many religions condemn and stigmatize vice, such as sex work, as undeserving of morality. This begs the question: how does a convoluted relationship that is vice and religion peacefully coexist in Singapore?

In *Break Through Your Mental Bureaucracy*, internationally recognized organizational consultant Ron Ashkenas (2012) points out that compartmentalization allows seemingly conflicting elements to coexist. The term 'compartmentalization' is defined as "a defence mechanism that we use to avoid the anxiety that arises from the clash of contradictory values or emotions." It creates mental boundaries which help us to better manage our feelings and opinions and make distinctions in various aspects of our life. When dealing with complex situations that do not have a clear-cut "model answer", compartmentalization can be used to consider different perspectives and approaches.

Ashkenas' (2012) view gives us an insight into religion's coexistence with vice through the lens of Singapore's urban planning. The scarcity of land has caused prices to rise in recent years. Furthermore, land zoning for commercial and residential use is implemented to maintain diversity. This creates a challenging situation for religious organizations when it comes to finding appropriate spaces to operate in. Consequently, smaller Buddhist and Taoist temples have relocated to Geylang for its cheaper land and location accessibility. Being a defense mechanism, compartmentalization allows us to accept sub-optimal outcomes by mentally distinguishing the 'good' from 'bad'. As the brothels only operate after sunset, they do not clash with the temples which open in the mornings and afternoons. Likewise, the Jamiyah Islamic Centre only opens till dusk. Hence, the coexistence of seemingly contrasting elements is possible.

The natural question that follows is, how does religion fit into the lives of sex workers?

In a research paper titled The Role of Religion among Sex Workers in Thailand, Professor of Religion Siroj Sorajjakool and Theologian Arelis Benitez (2015) discuss how religion can coexist with vices through the exploration of the plight of sex workers. The immoral nature of sex work contradicts religious beliefs such as Buddhism. However, the research pointed out that religiosity is used as a coping mechanism: religion "bring(s) a sense of comfort and peace to them…[and] accumulation of these religious acts may repay for the sins they have committed." The authors also highlight the role religion plays in the lives of those experiencing difficulty in their lives. Turning to religion helps these workers find inner peace in the face of life stressors, thus allowing them to remain in their profession.

From my observation and through further research, most of the sex workers in Singapore are foreign. They are mainly 'imported' from various countries such as Thailand, often driven by difficult life circumstances. Thus, not knowing where to turn to for support, they may seek a source of comfort in religion. Additionally, the various religious communities may provide a sense of belonging and solidarity for the aforementioned individuals who may be marginalized or shunned from mainstream society.

Returning to the original question, Ashkenas (2012) demonstrates that pragmatism allows conflicting elements to work, while Sorajjakool and Benitez

(2015) zoom in to understand that religion helps workers find solace. When read together, we are left with the final gap: does religion tolerate vice, and should we do so? Although seemingly paradoxical, the relationship between vice and religion may not be too distant as one might imagine.

Alexander Pope, a poet of the Enlightenment, writes, “To err is human, to forgive is divine.” (Pope, 1711, as cited in Marsceau, 2020). All Abrahamic religions recognize the necessity of forgiveness while maintaining a distinction between right and wrong. The Bible tells us that prostitution is sinful, and God forbids involvement with prostitutes. Yet, it preaches the importance of forgiveness with Jesus setting an example while being crucified on the cross. Similarly in Islam, the Quran is forgiving towards the transgressor: “Oh Lord, forgive my people for they do not know” (Ridhwan, 2021). In the same vein, Buddhism emphasizes morality through the Five Precepts, which are the Buddhist ‘code of morality’. Sex work contradicts the third precept which is to refrain from sexual misconduct. However, Buddhist psychology also emphasizes the importance of forgiveness: it is more pressing to help the ‘sinner’ overcome any wrongdoings, rather than hate the person.

Compartmentalization is a practical tool that helps us manage the complexities of social constructs and make sense of the world around us. Yet, its framework hinders the potential for growth and redemption. By solely focusing on transgressions, it limits our ability to see beyond mistakes and recognize the capacity for change. This may ultimately lead to marginalization and the creation of societal outcasts among minority groups.

Hence, rather than establishing mental boundaries towards individuals who have sinned, religion recognizes that humans are dynamic beings with the potential for transformation. It advocates a holistic approach that seeks to understand the underlying factors that contribute to one’s transgressions. Religion also cautions against reducing one to the compartments of their actions alone, preaching the importance of showing empathy towards individuals who have erred. Doing so allows us to move beyond the confinements of compartmentalization and recognize the inherent dignity and worth of every individual, regardless of their identity. By embracing this perspective, it fosters a more compassionate and inclusive society, one in which every individual can strive to live a virtuous life.

The presence of vice is something we must accept as a way of life. We cannot completely eradicate its existence as they are a “necessary evil”. If vice is banned outright, it would create more social issues such as increased crime rates, and less protection for workers. Indeed, vices like prostitution are ‘immoral’ as deemed by society and religions. However, while many religions condemn the acts of vice, they also emphasize the importance of forgiveness and redemption. In contrast, even though humans are imperfect and fallible, we can be harsh and unforgiving, shunning those deemed “immoral” as defined by societal norms. Perhaps then, the onus is on us as a society to change the paradigm, to be more accepting of those who are different from us.

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Figure 1. Lorong 12 Geylang

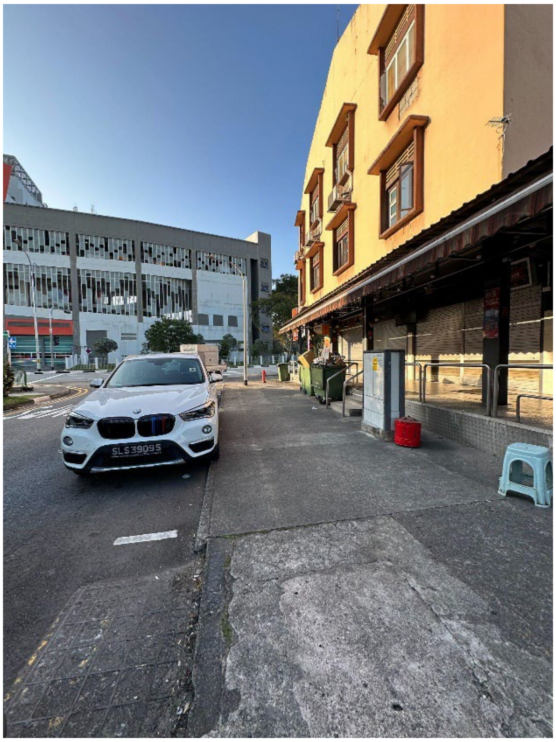

Figure 2. Illegally and sloppily parked car

Figure 3. The Chinese temple

Figure 4. The Mosque

Figure 7. Brothels along Geylang

Figure 5. People chilling and hanging around

Figure 6. A sex worker strolling along the streets of Geylang

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The Object of My Eyes: Why We Attach Meaning to Objects

· Cheryl Ong Xin Xuan ·

"Ah, girl! I'm going to buy some joss sticks," my father said as he hastily entered our neighborhood *kim zua ('Golden Paper', which refers to incense paper or sticks)* store, picking up offerings to pay respects to my late aunt.

I trailed behind him into the store as the old floor creaked. Instantly, my senses were overwhelmed by the fragrance of sandalwood. I heard the sound of a flick and searched for that distinct rasp of a lighter. The owner had lit up a joss stick, muttering words of fervent prayer in front of his shrine. The incense stick glowed orange and thick smoke lingered, engulfing the entire shop in an ethereal-like fog.

The shop was a riot of colors. Displayed on a strikingly purple shelf were joss sticks packaged in yellow, offerings drenched in neon pink, and anything else was almost always red. Standing amongst all the chaos was a small television. It was caked in dust – a stark contrast to the neatly lined-up prayer paraphernalia sold next to it. I watched the owner restock his items, as he mindlessly tossed away cupboard boxes. Yet, there was a touch of reverence when it came to handling the offerings like there was nothing more sacred. His actions were like a video on replay: line up the stacks, grumble in dissatisfaction, disassemble, and repeat.

I continued exploring, rummaging through boxes. I began pulling out *kim zua* which looked awfully similar to everyday items. An umbrella, cigarettes ... Even a Fanta can! With a gentle press, the *kim zua* creased and I sheepishly put the paper offerings back. I then realized how empty and light these were. The can was just a piece of rolled cupboard, and my amusement vanished. It felt strange seeing the things I took ever so for granted as offerings. The clothes I donned, the cans of soda I bought – these were all insignificant objects in my life, yet considered luxurious offerings to the dead.

Watching the owner painstakingly bend over a fire to burn his daily offerings, I wondered what made him consistent with such a practice. I asked my father, who only told me, 'So that his loved ones won't suffer in hell'. Now, we all carry the uncertainty of what happens after death. Yet, for those who believe in an afterlife where the material world ceases to exist, they still trust in objects to tide them through trials and tribulations. It is as if having outrageously fancy clothes and bungalows in the afterlife would mean comfort for certain, despite none of us truly knowing what happens then. I wondered why simple objects can hold so much power in life. We equate cars to status, wedding rings to lifelong commitment, and even childhood nostalgia to a precious '*chou chou*'.

This made me wonder, apart from regarding objects by their functional qualities, why do we inevitably assign them symbolic meanings?

In the article 'The object of my affection: attachment security and material culture', Bell and Spikins (2018) shed light on our attachment to objects. They argue that things can simulate various human emotions, experiences, and memories. From sensory nature to aesthetic appearance, objects provoke responses such as to calm us down and be more trusting of others. Bell and Spikins also claim that 'we perceive objects as having agency' (p.27). Be it through design, functionality, or symbolism, objects can influence or reinforce certain behaviors in various contexts. Albeit physically unresponsive, their inertness makes us feel secure, providing 'both permanence and portability lacking in people' (p.28), remaining constant in the face of unpredictability. Rather than reflect materialism, object attachment represents a deep-seated psychological need for emotional support.

Objects are mediums for us to capture and cope with feelings. They become emotionally charged when we develop significant attachments to them. Rather than an obsession with the material, it demonstrates our desperation to find solace whilst grasping concepts of our mortality like loss and death. They also help us to understand what we cannot see. Consider religious objects. Rosary beads, the Cross - such objects are considered sacred and are focal points in many religions. They grant believers a sense of identity and represent an everlasting commitment to one's convictions. They remind us that the link between God and us is real, helping us to believe despite the immaterial and non-scientific basis of many religions. Unlike humans, objects do not possess alternative agendas and are unchanging. Once they exist, they remain consistent, unlike people, nature, or even circumstances in life which can be erratic. Hence, we often look to objects as a comforting source of emotional support.

In the book *The Meaning of Things: Domestic Symbols of the Self*, Halton and Csikszentmihalyi (1981) examine the complex relationship we have with material possessions and how they shape our lives and identities. They argue that objects lend their semblance to the preconscious, becoming repositories of the human condition. They transmit human experiences and cultures, give us glimpses of the past, and are societal markers reflecting our affiliations. Halton and Csikszentmihalyi also posit that 'Man are not only homo sapiens or homo ludens, he is also homo faber' (p.1), the maker and user of objects who reflects what we interact with. By extension, objects also make and use us. This demonstrates a transaction, by which people exchange limited resources such as time and money to acquire certain objects deemed as 'valuable' or 'meaningful'. In return, objects gain symbolic significance and grow to define who we are. This exemplifies a dynamic exchange of values that involves reciprocity between an object and us.

Objects possess great symbolic power. They are salient in expressing personal and cultural identity, as seen in Chinese death rituals where flimsy '*kim zua*' and ashy joss sticks are physical embodiments of longing and honor for the deceased, preserving the deceased's presence beyond death. These objects concretize Chinese values, allowing them to be passed on through generations. Such tangibility enables objects to construct our identity based on distinct experiences, making them active agents in defining who we are. They solidify, represent, and communicate our identities in society. However, we may also be 'used' by these objects, where they influence our behaviors subconsciously. If we fail to differentiate between functionality and meaning attached by ourselves or society, we can become slaves to an object. Consider mobile phones. Most of us can barely move across a room, much less go from place to place, without a phone with us. Rather than take notifications as they come, or treat them as reminders, we somehow begin to keenly await for that ding of someone responding to us – be it a long-awaited email or a 'like' on a new social media post. Such alerts give us a unique pang of excitement. As we get hooked on this dopamine high, we begin to spiral into the endless cycle of instant gratification, and even live for it. Furthermore, phones have not only altered our attention spans, but also consistently shape our habits, whether we realize it or not. They are entrenched in almost every nook and cranny of our day-to-day lives - 'Googling' something up, listening to music on the commute to work, even checking the number of steps taken in a day! They are manifestations of the larger societal idea of constant connectivity and the need to always be 'in the know'. This reliance on our phones exemplifies the danger of what happens when we become prisoners to our possessions.

Bell and Spikins (2018) explain the reliance we have on objects, while Halton and Csikszentmihalyi (1981) go one step further by exploring how the person-object relationship is two-way and fluid. The former's analysis of an object's inertness implies that objects are whatever we choose to attach to it and are dull otherwise. However, the latter points to instances where objects are 'active' and can even have a 'life' of their own. So, what gives one object more 'life' than another?

While certain objects like mobile devices are getting more intelligent in manipulating our needs and shaping our way of life, I wondered how other objects – those that seem perfectly simple on the surface – can also feel more alive to us. I think that the 'life' an object embodies lies not just in how they are used, but how they are created. When we create, we mould our material to a particular vision – this form of self-expression gives our emotions structure. The creative process is cathartic, giving makers a sense of mastery of one's narrative and struggle. Oftentimes, our most precious objects are things we ourselves or our loved ones have created, not because of their function or beauty, but because we grasp the intentions behind these objects.

Yet, are regular, mass-produced objects still valuable to us? Aside from serving us various functions, the objects of our daily lives also give us a sense of security through their uniformity. Day-to-day items seem 'boring' because they are common. However, that same accessibility gives us familiarity and predictability, keeping us grounded despite the volatility of life. Perhaps this explains why paper offerings are often replicas of daily objects. By burning such offerings, the bereaved indulge in caring for their loved ones one last time. This reinforces that even in death, functional aspects of objects remain relevant, and are one of the few things that comfort the bereaved with the knowledge that their loved ones' needs are still tended to, via daily necessities. Given such complexity in our relationships with objects, I believe we can look differently at people's relationships with their possessions. Be it a minimalist or a luxury bag fanatic, rather than instinctively labelling others as 'hoarders' or 'too materialistic', we should instead ponder why such deep attachment comes about in the first place, because every person's relationship with objects is unique, multifaceted and still largely a mystery.

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The Emotional Economy

· Andy Chan Yan Meng ·

Figure 1. An overview of the arcade at Cow Play Cow Moo, Suntec City

The never-ending beeping sounds drowned in the upbeat, electronic music that resonated louder with every step I took towards the arcade. Dazzling gleams of colorful, flashing lights swirl into my peripheral vision, beckoning me closer. From immersive high-tech racing simulators to thrilling first-person shooting games, game machines with intricate graphics and attention-grabbing sound effects filled the room. The satisfying thuds of basketballs hitting the floor in basketball games invoked a wave of nostalgia.

My gaze shifted towards the woman engaged in a medal game. Her eyes were fixed on the movements of the machine, with one hand poised over her container filled with tokens and the other executing a relaxed, rhythmic tapping of the buttons, unleashing a shower of medals. As I observed her gameplay, I felt a mix of admiration and curiosity. The medals clattered as they cascaded through the obstacles, causing a chain reaction of medals tumbling off the edge, leaving me in awe of her skill and precision. Endless tickets churned out from the machines into baskets with neatly stacked tickets, a testament to her sustained play.

As the tokens dwindled, her movements became more urgent, each token inserted accompanied by a sigh of frustration. Her once relaxed posture had become stiff, shoulders tense as she willed the machine for just one more win. The last token was inserted with a decisive clink, and she watched it disappear with a sense of finality. She hesitated for a moment, seemingly weighing her options, before heading towards the token dispenser. Her container was now filled again, a visual representation of her determination to resume her position.

Figure 2. A group of adults playing the medal games

Phrases like 'Jackpot' and 'Big Win' create a sense of possibility, suggesting that players have a chance to acquire a prize for a fraction of the retail price. Furthermore, the cost of each play is substantially minimal, giving the impression that players have multiple opportunities to win. Unfortunately, the reality is that the actual value of the prizes frequently falls short of the amount of money players put into the games. Often, the same prizes can be acquired at a much lower cost outside, yet we see players who continuously return.

Perhaps these players have fallen prey to the "sunk cost fallacy". They persist in playing, driven by a belief that their investment of time and money must eventually pay off, to justify their previous investments and avoid feeling like they have wasted their resources (Tuovila, 2022). This psychological effect makes it difficult for players to stop playing, even if it is no longer in their best interests to continue.

This phenomenon raises questions about the psychological factors that drive individuals to persist in playing these games despite the discrepancy between the perceived and actual value of the prizes. It also highlights the potential for exploitation by arcade operators who use these psychological tactics to encourage players to spend more than they may have initially intended, leading me to wonder: How have our emotions been manipulated for profit?

In the journal article "The Impact of Sound in Modern Multiline Video Slot Machine Play", Dixon et al. (2013) posit that auditory stimuli, such as the sounds of slot machines, play a critical role in reinforcing player spending on slot machines. According to the study, the sounds of slot machines contribute to the players' overall levels of arousal and make the game more exciting, increasing the reinforcing properties of gambling behavior. Moreover, these sounds contribute to the players' tendency to underestimate their losses (Dixon et al., 2013). Wins include any form of payouts, regardless of whether they exceed the players' original betting amount and these 'wins' are often accompanied by visual stimuli such as flashing lights and bright colors that serve to amplify the impact of the sound, creating a powerful sensory overload that makes it difficult for players to maintain a clear understanding of their actual odds of winning. Through the use of sensory stimuli designed to elicit certain emotions, these gambling operators keep players hooked on their machines while they continue churning a profit.

"Sensory priming" is a phenomenon that refers to the impact of a previous sensory stimulus on the processing and perception of a subsequent stimulus, which can affect our behavior at a subconscious level. (Weingarten et al., 2016). Dixon et al.'s (2013) research emphasizes the potential of sensory priming as a powerful tool in marketing and advertising. By utilizing sensory cues such as color, sound, or scent, companies can subconsciously prime consumers to associate positive emotions or experiences with their products. This fortifies the idea that the purpose of consumption is not just to acquire goods or services, but also to seek out emotional fulfilment. Beyond an increased likelihood of unnecessary purchases, these manipulative tactics have created a dependency on these products that did not exist before. This emotional void can lead to continued purchases even if consumers do not necessarily need or want the product, as they associate positive emotions with a particular product.

The consequences of "sensory priming" are amplified by consumer capitalism, which prioritizes the creation of products and services that stimulate consumers' emotional desires in order to generate profits, potentially suggesting why players sit in front of arcade machines for long hours. With the rise of consumer capitalism, companies have reinvented themselves by creating experiential products. We are evolutionarily designed to use our senses, and our brains are wired to process sensory information in specific ways. If our daily lives are filled with constant exposures to sensory cues, this prompts the question, how much control do we truly have over our purchasing decisions?

As individuals navigate a world saturated with sensory cues and experiential products, it becomes evident that our purchasing decisions are not solely based on rational assessments of our needs. Recognizing the impact of emotions on decision-making is therefore crucial, as it unveils our inclination to rely on intuitive and emotional responses rather than rational analysis.

Beshears and Gino (2015), in their article "Leaders as Decision Architects," revisit two cognitive processes for decision-making to demonstrate how individuals tend to overly rely on their instincts and emotions when making decisions. System 1 is an intuitive, automatic, largely unconscious mode, while System 2 is a conscious, effortful, analytical mode. Emotions have long been recognized as a powerful driver of human behavior. This proclivity often leads to undesired outcomes since System 1 thinking, which operates on mental shortcuts and intuitive responses, often "goes unchecked by analysis and deliberation" and "these shortcuts lead us astray" (Beshears and Gino, 2015, p.4). This hinges on the fact that System 1 thinking is often more susceptible to emotional appeals and can be easily swayed by emotional triggers such as fear, desire, and pleasure, which can lead individuals to make purchases based on their emotional impulses rather than a rational assessment of their needs. In contrast, engaging System 2 thinking requires more cognitive effort, by considering multiple factors and perspectives. Such insights highlight how System 2 thinking, with its emphasis on analysis and deliberation, allows us to see things more clearly, while System 1 thinking reveals our vulnerability to external influences.

At the same time, the manipulation of human emotions for profit relies on the understanding that emotional appeals are more effective in influencing behavior than rational appeals. According to Beshears and Gino (2015), companies can then bypass System 2 thinking and prompt System 1 thinking and utilize these emotional triggers to their advantage to achieve desired outcomes.

The assumption is that engaging in System 2 thinking and analyzing our decisions could help us resist the influence of manipulative marketing tactics. However, the oversimplified binary distinction overlooks the relationship between emotions and rationality caused by the unconscious mind. As a result, the simple dichotomy, with emotions being seen as an obstacle to clear thinking and rationality as the solution, fails to capture the complexity of the decision-making process. Emotions and rationality are treated as separate forces when they are actually closely intertwined factors that are not truly mutually exclusive. Emotions provide valuable information about our preferences and priorities, while rationality helps us to identify logical flaws. Without emotions, reasoning becomes nothing more than a mechanical way of making calculations by weighing the costs and benefits of different options. Consequently, understanding the interplay between our emotions and decision-making is critical in navigating the complexities of consumer behavior.

As Dixon et al., (2013) established, sensory cues can manipulate consumers' emotions and activate unconscious associations in our minds, creating a perception that may not necessarily align with reality. In this unconscious realm where our instincts, emotions, and automatic responses reside, our decision-making processes have been influenced without our explicit knowledge. Therefore, even when we think we are making a rational decision, it could still be influenced by our subconscious biases and misconceptions, revealing the interconnectedness between the decision-making processes. Can we then truly gain full autonomy over our decisions, or are we merely puppets in the hands of our subconscious, guided by the invisible strings of our emotional desires?

Both Dixon et al., (2013) and Gino and Beshears (2015) shed light on how our emotions are influenced by sensory cues, and how they overwrite rational analysis, by suggesting that emotions can play a significant role in shaping our choices. Yet, the very fact that our subconscious decisions rely on our emotions highlights that we are not built to disregard our emotions. The sunk cost fallacy, which compels us to justify our past decisions even when they no longer serve us, is a prime example of how our emotions lead us down a path of self-deception. Our emotional desires prompt us to consider the implications of not having sufficient cognitive and emotional control over the most important decisions we make in life.

Despite our desire for autonomy, it is precisely our experiences and emotions that shape us, and we cannot deny their influence. This irony is often overlooked when we accuse companies of unethical marketing practices, as it implies that we have no choice and are unable to make conscious decisions. So, before we pass judgement on companies for their purportedly 'unethical' marketing practices, let us reflect that perhaps, consumers have been blindsided by their false independence from the very marketing ploys that have been used to generate consumerist demand in the first place.

By actively participating in a system that exploits our emotional susceptibilities, are we not complicit in the very exploitation we seek to condemn? The greatest threat to our autonomy is not primarily a society that prioritizes profit, but a society where consumerist behavior is left unanalyzed. Amidst the ceaseless barrage of marketing tactics designed to exploit our deepest emotions, we are most vulnerable when we are unaware of our susceptibility to otherwise seemingly superficial pleasures, which might just sound like a familiar arcade jingle.

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Rewriting Our Original Autobiographical Movies

· Angela Cheah Ai Jia ·

I got a whiff of honey popcorn lingering in a "landfill" of random seating furniture. Striking red neon lights stretched across the ceiling in a zigzag pattern and multiple yellow light bulbs strung together hung like vines. There were indie film posters that would make the pretentious go, "You've never seen this movie?". They were plastered on every pillar to great effect as people did stop mid-walk to admire them. A cold draft crept up on me from the Majestic Hall with the words "Now Showing: THE WHALE" handwritten on its door. The distinctive retro decor of Projector X Picturehouse made the run-of-the-mill Golden Village outlet look unadorned.

A flash crept out from behind the vintage analogue photobooth's mahogany curtain. Then it happened again. And again. Soon enough, a voice repeating "2..., 3..., 4..." started to sound like a broken record in the background, as a group of friends tried to divide themselves evenly for the next set of pictures. This was followed by coins clanking against the coin slots and a series of anxious screams coming from behind the red veil. Someone had messed up, which led to a new strategy being tested. The group were at it for so long that I had time to return with overpriced fries. From the multiple high fives seen after the picture emerged, I supposed the effort was worth it. The photograph was definitely a lifelong keepsake.

Then again, the extra four dollars and (by my estimation) hour spent on getting another four perfect snapshots seemed excessive, or even unnecessary. It would definitely not have been the disaster of the century if they had accepted the semi-failed picture and treasured it as a funny memory. It then made me wonder why we are unwilling to trust the process and live in the spontaneity of life. We are often preoccupied with getting that perfect moment as if there's an imaginary panel of critics watching our autobiographical movie. Admittedly, second chances and do-overs enable us to improve on ourselves and reach our expectations. However, I understand that if heavily depended on, we might forget to thrive and make the most out of the genuine but fleeting moments in life as our unapologetic selves. But perhaps our compelling willfulness to appear our best has driven such an urge to ensure we capture perfect moments. So now, has our fixation on how we appear corrupted the genuineness of our everyday actions?

Spontaneity is the very heart of improvisation. Crosnan and Vera (2004) mentioned how actors can only anticipate and hope for the best that their acts will have a desirable outcome, which would come as a reassurance of satisfactory performance. However, there are times where the audience will be confused by or be judgemental of the acts. Moreover, such an awkward atmosphere can cause the show to feel endless and insufferable. The livelihood of these performers are heavily dependent on how entertaining they are. Therefore, they strive to ensure they have people wanting to return for more. Over time, performers learn what people find entertaining or not, which ultimately helps them craft a cheat sheet on the correct way to go about their act. But notice how in order to ride on the high feeling of success, they basically abandon the spontaneous aspect of improvisation.

I realized that spontaneous activities like improvisation and social interaction are very paradoxical in nature where they lose spontaneity over time. Social interactions are greatly controlled by first impressions. When we fall short of expectations, a cheat sheet on how to act could seemingly help tame this monster we call social interaction. However, the cheat sheet is unlikely to be one that is one-size-fits-all and needs to be updated after various experiences. Hence, we realize a need to hone our performances because we get better at discovering the nuances of how different people behave and respond. Our own interpretations of others' behaviors then come in and evolve as well. Gradually, we become more attuned to assessing our social environments and picking up on social cues that bug us. The extent to which we analyze behaviors reflects how sensitive we can get. This is because, like seasoned performers, growing up, we are likely to become increasingly less naive about and indifferent to how people interact and treat us. Fakeness is more easily noticed when the performer becomes more clinical and so they fuss over perfecting a cheat sheet to avoid getting caught because what goes on each person's radar varies. Ergo, we try our best to filter out idiosyncrasies disliked by others and present to them ideally only what they fancy.

Spontaneity aside, our personalities can affect how authentically we present ourselves. I was intrigued by Jung's (2021) concept of the collective unconscious, which "contains and facilitates universal elements that are inherited through the sum total of human history". Jung compares this phenomenon, known as archetypes, to biological evolution, suggesting that our personalities have an innate tendency to have been 'mutated from' or 'recombined with' traits and cultures from past or present generations. Interestingly, individuals can have numerous deep-seated recurring similarities in the motifs and symbolic expressions of their unconscious minds, even if they have never crossed paths in their lifetime. It stems from the fact that humans have been perpetually influenced by one another across disparate cultures and timelines, be it deliberately or not. The combination of traits we each inherit can possibly make us inimitable, but the individual traits are nevertheless mirrors of someone else's. Thus, it appears only our first human ancestors were truly authentic by definition.

Evidently, parallels exist among the basis of personalities of almost all humans. Thus, there is no way for everyone to have an unprecedented personality even if they tried. But this does not mean we should feel conscious about our possible lack of individuality. We become less true to ourselves when we steer our persona to only depict favorable archetypes. Archetypes can provide a sense of personal meaning and a sort of predisposed character we should seek to be. However, it's hard to do so since we can have multitudes of archetypal characters due to the complexities of the human mind. Ideally, we should integrate all archetypes within ourselves but we often unconsciously reject archetypes we perceive as antagonistic, deterring us from embracing ourselves. Consequently, the persona portrays what we think we are in real life and what we think people can accept but may not fully reflect our true selves. This can influence the difficulty for us to accept that we may not appear our best at times. Likewise, writers avoid subverting a character's archetype to prevent confusing and frustrating audiences. For instance, Miles Quaritch from the film *Avatar* does not deviate from his sole archetype of the antagonist and is single-minded in his pursuit to exploit Pandora. It makes it easy for audiences to understand his motives throughout the movie, but it produces a rather bland character who already lacks a cool origin story.

Crosnan and Vera (2004) explain that we become less spontaneous because we grow sensitive to people's treatment towards us. Also, Jung (2021) introduces the concept of archetypes in us and how we are innately unable to incorporate all types. From both ideas, we recognize the difficulty to stay in the continual state of our true selves whether intentionally or unwittingly. Still, there may be considerable but overlooked value to it. Being authentic means also tapping into our antagonistic archetypes as pointed out by Jung (2021). But if so, actions and thoughts that are deleterious and unorthodox in societal standards could surface. Therefore, we perform unspoken 'checks and balances' to deter this from happening, like identifying people's mannerisms and schools of thought that are disliked as brought up by Crosnan and Vera (2004). Social interactions are mostly fleeting moments. We rarely have the opportunity to ever fully empathize with and understand the depths of every archetype each person has. Discouraging people from showcasing their bona fide selves seems cruel and it ends up making humans somewhat fake, but it becomes easier to keep up with one another. Unknowingly maintaining some congeniality in our social environments does not make being inauthentic seem futile or selfish. Although we become conditioned to social environments where we rarely get to empathize with personas unfamiliar to us, the silver lining is that we get to focus on just a few archetypes and learn to embrace those fully. We are then not necessarily presenting our favorable personas just for show, but because it's what is most comfortable. When we are comfortable in our own skin and with others, our anxieties about guaranteeing that every other moment in life has to be perfect start to fade too.

In hindsight, who cares if we are not truly authentic or spontaneous. The way I see it, manipulating our actions to make outcomes to our liking, like refining a strategy to get perfect photos and filtering which part of ourselves we want to capture, makes us ingenuine. But it also helps us make the most out of opportunities. It's challenging to be fully authentic and it's not just due to our obsession with our appearance. But it doesn't mean we are bound to become one dimensional. The group ended up with two strips of photos capturing different 'characters' of themselves. Whichever version they prefer just helps show what part of themselves they feel comfortable and happy in. By realizing what makes us feel truly confident, we eventually get to blossom and appreciate our full potential in that 'character' instead of fruitless efforts to combine everything. And I think that's as true to ourselves as we can be. So why bother being so critical as to whether it was spontaneous or original and waste energy psychoanalyzing others and ourselves. If the amelioration of our actions makes us happy then so be it!

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Riding Through Time: A Journey of Taxi Stories

· Kok Ming Toh ·

As I entered the taxi, the familiar smell of leather and air freshener in the vehicle filled my nostrils. Usually, the ride was silent enough to hear the hum of the engine and the sounds of our breath to fill the space. But today felt different as I slid into the front seat and exchanged a polite smile with the driver. Mustering up my courage, I broke the usual silence that filled the cab.

Starting the conversation by probing more about his background, Mr. Teng exclaimed, "Wah, no one ask me this question before!" His enthusiastic response caught me off guard. Were people today really this antisocial? I wondered. However, my thoughts were quickly interrupted by Mr Teng's burst of energy as he began to recount his life experiences in vivid details. Glancing at the navigation system, he mumbled, "got time or not?" before launching into a collection of stories. It was as if Mr. Teng had been holding back his stories for a long time, and now that he had someone to listen, his enthusiasm overflowed.

Before I knew it, it was time to say goodbye. "Time up liao. Ah boy ah, thank you for listening ah, I hope more will spend the time to hear everyone's stories," Mr. Teng said. At that moment, his words jolted me back to reality, and I realized we had arrived at my destination, and I had to prepare to alight from the vehicle.

As I waved Mr. Teng and the taxi goodbye, I couldn't help but think back on our conversation. Amidst his enthusiastic outbursts, I did notice his rather overt but evidently unconscious glances at the time before delving into another story, as though he was racing against the clock. As I reflected on this, I realized that I rarely hear of people taking the time to exchange stories, despite the countless opportunities that present themselves. Not surprisingly, "I don't have time" seems to be a common response. And yet, it's not surprising: our lives are busy and filled with distractions that it's easy to feel like there's never enough time for anything. This realization led me to ponder a thought: why do we no longer have time for stories?

Bluedorn (2002), a Management professor at the University of Missouri, explores the subjectivity of time, and examines the diverse ways humans experience and organize time in his book, *The Human Organization of Time: Temporal Realities and Experience.* According to Bluedorn, "time is a social construction…concepts and values we hold about various times are the products of human interaction" (p. 46). This implies that our perception of time is shaped by various factors, such as culture and history. Additionally, he suggests that time is a subjective experience. He asserts that one's attitudes towards time are molded by the community they belong to and, proposes time as a "fundamental dimension of human existence" (p.20). Thus, while everyone has the same quantity of time, the definition and significance of time varies greatly among individuals.

Bluedorn's (2002) argument made me realize that as a citizen in a highly competitive nation, we view time as a priced commodity and thus choose to determine what to spend it on. In my constant rush to reach different places or complete different assignments, I have consistently brushed off unnecessary tasks with a simplistic reply of "I don't have time." In my previous taxi rides, I had used the same excuse to not engage with the drivers, even though I knew I would be stuck in the car with them for the entire journey. This could mean that the community I belong to has shaped my perspective, leading me to consciously prioritize productive activities, aligning myself with societal expectations. As Bluedorn aptly suggests, "cultural forces, seem to have played a major role, and those forces directly involve forms of human time" (p.2), indicating that our surrounding community significantly influences how we choose to allocate our time.

However, this realization sparked a profound inquiry within me, leading me to ponder the intrinsic values of enriching our lives through stories even though money can be used to obtain conveniences, resources, or services that save or prolong time. On the other hand, stories are not able to directly extend or manipulate time. This discovery compelled me to delve deeper into the significance of storytelling, questioning the intangible qualities that stories possess which transcend the transactional nature of time.

In his TedxTalk, communications expert and former professional actor Dominic Colenso (2017) pointed out how the stories we share through pictures on social media only provide a limited glimpse of our lives. He compares it to "watching a trailer, but never watching the whole film" (02:36), where one would get an idea of someone's lives, while lacking the emotional connection. Colenso also emphasizes the powerful effect of stories, stating that "when we give stories a voice, we allow them to resonate in the hearts and the minds of the people we interact with." (08:52). With stories having the potential to leave an impact on others, what explains the diminishing occurrence of stories being told. Colenso offers a perspective that stories are not being shared at every chance because "we live in a time-poor society where we are encouraged to keep things brief" (08:40). In essence, less stories are told as Colenso believes that there is a need to be logical and efficient in a society plagued with "hurry sickness."

After understanding Colenso's (2017) conception of stories as a way for different individuals to relive the experiences of others, it then dawned on me that although I live in a highly connected society due to advent of social media and internet, I feel the lack of emotional connection with the people around me. Recollecting my experience with Mr. Teng, it then became clear to me that the affinity between the driver and myself was strong due to the narratives exchanged in the taxi. At that instant, it made me question why stories were not told even though it had the potential to connect. Was it because we live in a "time-poor" Singapore, so we struggle to allocate time or was it something more? Could it be that we fail to see the significance of stories instead?

Colenso (2017) highlights the significance of stories and proposes that stories are not told because we are living in a society which is deprived of time. However, as challenged by Bluedorn's (2002) argument, time is relative, and it is a conscious decision made by individuals to determine what to spend it on. I realized that time, as a social construct heavily influenced by culture, is treated as a priced commodity in Singapore's pursuit of materialistic gains. This is evident in the prevalent sacrifice of personal time by employees, prioritizing wealth accumulation over leisure and experiences. The fast-paced lifestyle reinforces the view of time as a valuable resource to be monetized for materialistic goals. Despite the convenient excuse of "I don't have time" to justify my disregard for stories, I now recognize they are able to provide valuable experiences and wisdom, as they allow myself to understand different perspectives. Ironically, by neglecting stories in an attempt to make our lives more streamlined, we may risk losing more time and resources when encountering similar situations, such as avoiding scams by learning from the experiences of others. This revelation made me aware that it isn't because we don't have time for stories but instead, I actively do not pursue them because I may have undervalued their worth and believe they would not be worthwhile listening to them.

Looking back, the ride with Mr. Teng made me realize the stories of everyone's everyday lives are precious and valuable. It also served as a poignant reminder that time will always be a commodity that we never appreciate till we exhaust it. In our time-poor society, we often overlook the importance of these narratives, and fail to appreciate the emotional connections and insights they offer. However, we have the power to change this narrative. Instead, let's make the conscious effort to listen, share and value stories. We may uncover a connection, a revelation or an experience that has the potential to transform our life.

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Shaming Away Compulsive Behaviours: Is It Really Effective?

· Neo Zhi Xuan ·

As I strolled through Serangoon, I was greeted by an aroma of medicated oil that was strong enough to linger on your skin after a shower. Crowds of excited citizens lined the Singapore Pools outlet, their eyes darting between a betting paper in hand and the screen. "*Swee lah*!", a chorus of celebration echoed. Compared to the peaceful onlookers, the gamblers seemed to have escaped into a world of their own where nothing could distract them. Or maybe not. "Told you to stay at home, but you still choose to come here and do useless things", a woman yelled at a man who appeared to be her partner. In a flustered attempt to respond, he mumbled: "*Walao*, I... I could have won but the horses are not warmed up today." Similar arguments reverberated around a crowd whose faces sported a noticeable frown. A simple game of betting on probability seemed to elicit distinct emotions of pleasure and shame.

Having heard similar stories of unhappiness from my relatives, I approached one of them—Mr. Tan, a compulsive gambler—to learn more about it. "*Kannina*, they control my money like a little kid, but I never need to borrow to gamble!" Cracking his knuckles nervously, he recounted his tumultuous relationship with his family, who doubted his ability to manage finances independently, keeping a watchful eye on his expenses. They seemed to reduce his worth to a child who boasted little self-control, inducing feelings of inadequacy in him.

Was Mr Tan's family shaming him for dedicating most of his time to gambling instead of his loved ones? He obviously didn't think so. "I cook and clean for them every day, but because I gamble, they say I am irresponsible for the family." "I don't feel like talking to them sometimes." Clearly, they were not on the same wavelength—while he did not notice any issues with his actions, his family viewed it as a lack of responsibility. Although they had good intentions to help him improve his financial management skills, their words had seemingly pushed him away from them, making it harder for them to communicate properly.

Despite the obvious fact that Mr. Tan's family had difficulty in helping him fully recognize his mistakes, it was intriguing to observe how the feelings of shame they had invoked in him helped anchor him to reality, preventing him from squandering everything. Here, it is evident that individuals elicit feelings of shame in others whose actions divert from social norms, hoping to spur change in them - one instance would be compulsive behavior like gambling, which people return uncontrollably to, albeit adverse consequences. However, shame fails to alter compulsive behavior beyond providing people with a superficial understanding that they are in the wrong. In this case, why is it ineffective in modifying this behavior?

In "An Investigation of the Association Between Shame and Problem Gambling," Schlagintweit et al. (2017) posit that shame is a sentiment of inadequacy arising from poor self-evaluation, like being preoccupied by our shortcomings. For compulsive behaviors like gambling, people shame gamblers by labelling them and their habits as worthless. To cope with these feelings, gamblers may resort to the same shame-invoking acts to escape it - thereby creating a recurrent cycle of persistent compulsive behavior and shame. Alternatively, when we internalize the notion that we are worthless, we could find it futile to find new methods to enhance our "self." Consequently, we return to old habits/behavior that we are most familiar with as a coping mechanism, regardless of its detrimental impact on us.

Schlagintweit et al. (2017) expound on how shame invites defensive behavior. As shame causes individuals to dwell on how the self is deficient, they are spurred on to avoid shame-inducing situations, and seek defensive mechanisms like rage and denial. Indeed, we may establish walls around us to defend against criticism and maintain our mental well-being. However, drawing back to Mr. Tan's experiences, these barriers lead to a disconnection in thoughts between family members. Akin to him, we could fail to comprehend and learn from their positive intentions. Simultaneously, they resume similar, ineffective shame tactics in hopes that their good intentions will eventually spur change. Although this distance between people arising from the shame directed at them does not justify compulsive behavior, perhaps it explains why they sustain such adverse behaviors.

Clearly, shame directed at us can inhibit our process of behavioral change. However, as evidenced by Mr Tan's anecdote, its ability to deter him from spiraling out of control to his compulsive tendencies proved that this emotion reminded him that his actions affect others at the baseline. If so, why does it not go beyond this level, to motivate us to fully transform our behavior for the better?

Tangney et al. (2007) explore this idea from a psychological standpoint, evaluating the emotion of guilt which is effective in invoking behavioral change. While shame emphasizes the inadequacy of the self, guilt focuses on the negative impacts of our action, which is distinct from the self, shifting the target of condemnation away. In other words, the point seems to be that when we are guilty about our actions, we are more empathetic about its impact on others, encouraging us to act constructively to alter it. In contrast, when we feel ashamed, we dwell so much on the self that we do not even see the effects of our compulsive habits, let alone modify it.

We can observe that both emotions are distinct in both characteristics and effects on human behavior. Tangney et al. (2007) build on this, noting that it is a painful process to "transform" a self that we perceive as inadequate when we feel ashamed. Conversely, for guilt targeted on one's actions, it is comparatively easier to alter our behavior and rectify its consequences. Certainly, we are reluctant to revamp our "self" as our inadequacies could stem from multiple sources and are onerous to resolve individually. If we are unsuccessful in resolving sentiments of shame, we continuously internalize the idea that our actions hold no worth. Hence, we naturally start to disregard any impact stemming from our actions and fail to transition towards feeling guilty about its repercussions, much less seek alteration in it.

Drawing from Schlagintweit et al.'s (2017) and Tangney et al.'s (2007) insights, they concur that experiences of shame could significantly diminish our ability to empathize with others. While the former suggests that the walls we set up due to our shame can impede our ability to discern the intentions of those around us, the latter implies that our inability to transition towards guilt in our actions can blind us from its external impact. However, within the good intentions behind the shame directed against compulsive behavior, does it intentionally alienate people as described? Both authors fall short in addressing the idea, that this is unlikely nor consider the difficulty in differentiating between shame and guilt which we often use interchangeably as a negative reaction to one's actions. However, they clearly differ as shame is our poor evaluation of ourselves, while guilt involves recognizing our impact on others. It is doubtful that we can transit from shame to guilt when we can barely discern between them.

The interchangeable use of these emotions has prompted my realization that perhaps we were not raised learning to distinguish between them. In the context of my Asian culture, where obedience is highly valued, we may attempt to alter others' behavior by making them feel powerless, motivating them to conform. As shame is effective in doing so, our words could have a natural tendency to focus on it over guilt in behavior, thus we inadvertently cause harm to others. To avoid this, it is paramount to comprehend this distinction in order to identify appropriate measures to effectively encourage behavioral change, specifically the shift towards guilt. Extending this to Mr. Tan's narrative, if we, like his family, maintain at the level of shame - reducing individuals' self-worth, and not transition to guilt - the focus in their behavior, we can only alert a person about their wrongdoings. Thinking back, despite being harped on incessantly by my parents for my "compulsive gaming habits", it hardly deterred me from sneaking out for FIFA matches when they were asleep. Only as we begin comprehending the distinct emotions our words bear, can we transit to conveying emotions, not exclusive to guilt, that invoke positive behavioral change in others.

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The Authenticity of Heritage Sites Around the World in Today's Context

· **Nikshita Nivashini SK** ·

Spiritual chants resonate from the Sri Veeramakaliamman Temple in the heart of Little India. Along Racecourse Road, families and friends are happily chatting and enjoying the wide array of authentic Southern and Northern Indian cuisines, from the famous fish head curry at the Banana Leaf Apollo to other Tandoori dishes. Numerous garland-makers are weaving roses, marigolds, and jasmine flowers for sale along Buffalo Road. The mouth-watering and pungent aromas, alongside the scents of prayer incense sticks and freshly imported tropical fruits, waft through the air. Supermarkets are also selling Indian-imported groceries and handmade Indian sweets. The streets are filled with sensational Tamil music and many colorful, preserved 2-storey shophouses that lodge migrants and operate mostly with Indian-owned and managed goldsmiths, cultural arts groups and traditional sari stores selling vibrantly colored imported textiles. In them, wooden furnishings with engravings of Hindu deities and traditional designs are displayed. Several local olden-day trades like street barbers and trishaw uncles remain, despite Singapore's modernization and evolution.

Strikingly, I noticed some Singaporean twists to the iconic landmark, through the variety of local and fusion cuisines offered in the renowned Tekka Market Hawker Centre and the mix of churches, a mosque, Hindu, and Chinese temples; catering to everyone, regardless of race, locality and ethnicity. Hawkers of all races were happily conversing in their dialects, with long queues of tourists, migrants and locals lining the stalls. This is significant since the acceptance and representation of diverse cultures and religions is unique to our rich-multicultural nation, making Little India so close to home for Indians, yet welcoming to other Singaporeans and foreigners.

These observations made me reflect upon the importance of truthfully preserving such ethnic districts to their traditional roots, and whether localization and modernization degrades their extent of authenticity, considering the inevitable globalization that we experience in our increasingly diverse and interconnected world today. As such, I was motivated to question how true to their traditional ethnic roots are cultural heritage sites around the world today, given the effects of inevitable globalization, localization and modernization that could possibly compromise the site's authenticity?

According to Bluedorn's (2015) *Straits Times* article "Romantic Vigan," Vigan City in the Philippines is one of Asia's few still intact, "best-preserved" Spanish colonial towns capturing the elegant exposition of the

Conquistadores era. Authentic Spanish designs encapsulate plazas, furniture, museums, churches, and wealthy mercantile townhouses. The alleys echo with the clip-clopping hooves of horse-drawn carriages called Kalesa. Nonetheless, within the Chinese-influenced cobblestone streets, conversations are mostly in Tagalog. Traditional Chinese lion-dog statues remain, guarding the Churches. The modern café-bars along Crisologo Street serve Spanish, Ilocano and Chinese cuisines, among others. However, do these non-Spanish features degrade the authenticity of the Spanish town?

Perhaps not. The original remnants of ancient Spanish elements and constant efforts to integrate Spanish heritage through the architectural integrity, art and food, comprehensively represents the role of the Spanish in Philippines' growth. The infusion of Chinese-influenced cuisines, furniture and artifacts symbolize the past economic and cultural contributions of Chinese merchants/traders to Vigan, marking the historical legacy they left behind. Moreover, the inculcation of local-Ilocano cuisine metaphorically symbolizes the local population's tenacity in forging their identity within their motherland, despite challenges during colonization. The modern cafes and Western cuisine for instance, additionally help the city remain attractive to youths and inclusive to visitors. Essentially, Vigan, as a heritage site within the Philippines, holistically preserves the true ethnic roots behind Philippines' development, through the Spanish colonization, Chinese merchants' influence, and native culture.

Another heritage site would be Manhattan Chinatown, which Luis Gusto (2022), through his YouTube vlog on Manhattan Chinatown, proclaims as "the most original, largest immigrant populated and famous Chinatown in New York City." In the video, Gusto's visit to Mei Lai Wah restaurant and Nom Wah Tea Parlour showcased the authentic traditional dishes served, specifically, Dimsum and oolong tea. He also visited Columbus Park to "truly experience" Chinatown's culture, through the traditional Chinese music, statues, Fan Tan game, Chinese opera, history museum, Chinese schools, and the Mahayana Buddhist Temple. He concluded by expanding on the birth of American-Chinese foods, namely, noodles with peanut butter sauce.

Decades ago, the cultural and linguistic barriers, street-warfare, discrimination, legally enforced Exclusion Act, and still-preserved cramp tenement buildings made it challenging for Chinese Immigrants to adapt to the cultural differences and peacefully flourish in America, instigating them to start their own laundry and gift shops, underground opium dens, brothels, and restaurants, thus, establishing Chinatown, where they can freely express their cultures and comfortably reside within.

The Chinese-owned businesses, authentic Chinese food, architecture, traditional Calligraphy, annual Chinese New Year celebrations, street lanterns and monuments like the Confucius statue prove how Chinatown has created a home for Chinese immigrants, bringing them business and employment opportunities and helping them escape the economic and political instabilities in China and America, just as Little India has for Singapore's Indian immigrants. The Chinese signboards help ease the language barrier, and traditional zodiac characters are seen painted on street walls.

However, communication within Chinatown is mostly in English. The museum showcases the culture and role of Chinese Immigrants in America, and not just

Chinese culture itself. The video additionally featured a Malaysian-Indonesian Restaurant, Taiwan-originated Bubble tea, Bangkok Centre Groceries and a completely Western McDonald's outlet, among other ethnic businesses. The pork buns, like the noodles, have been Americanized to create Western flavors, much unlike the original steam buns. Manhattan Chinatown represents the historical emergence and cultural influence of Chinese immigrants, but in America's context. However, again, does this degrade Chinatown's authenticity as a Chinese cultural town?

In our increasingly multicultural society, Manhattan Chinatown must remain inclusive to native Americans, while creating a comfortable space for Chinese Immigrants and welcoming tourists, especially since this is a heritage district located within Manhattan. These Western and Asian businesses merely serve the purpose of inclusiveness. Irrefutably, the site still provides an authentic experience of Chinese culture.

From both Yip (2015) and Gusto's (2022) pieces, it is evident that many heritage sites do not necessarily only contain the cultural elements unique to the ethnicity of focus, but also, other ethnic, modernized, and localized features. Nevertheless, while these features might seem unrelated to the specific ethnic culture that the site aims to portray, undeniably, they still have played and continue to play a crucial role in remaining inclusive to all, while authentically embodying the evolvement, development, and cultural and historical roots of both the site itself, and importantly, the host nation that it is constructed within, in a more holistic and in-depth manner.

Hence, while all heritage sites aim to genuinely represent their historical, cultural and ethnic roots, identical representation is almost impossible due to our increasingly globalized world. Regardless, having some degree of modernization, modification and localization does not mean that a site is completely inaccurate and ingenuine. They simply indicate the pressing need to cater to people from all backgrounds due to globalization, especially since such sites are often popular tourist attractions. The incorporation of other ethnic structures should not dismiss or discredit the existing cultural and historical elements within the districts, that were specially and intentionally built to truthfully represent the specific ethnicity. Furthermore, over time, some of the infrastructures within Little India, Manhattan Chinatown and Vigan have been refurbished and repaired to ensure their durability and conditions, due to gradual wear and tear and/or war. This modernization is inevitable and necessary for the safety, continued maintenance and optimal preservation of these sites' heritage, culture and historical significance. Thus, no site is 100% original considering the changes made through time, whether to cater to globalization, the local population or to ensure the relevance and endurance of its authentic elements. Modernization, localization, and globalization are, therefore, not necessarily bad, since such sites still authentically represent both the local and ethnic cultures and the traditional roots behind the ethnic population's role in the host country's nation-building, history, and culture. They grant tourists, locals, and immigrants the privilege of continuing to experience, enjoy and learn about the ethnicity itself and the traditions within the host country, thus, simultaneously safeguarding the site's original history and heritage.

Cultural heritage sites around the world today are largely true to their traditional roots, especially in the context of the host country. Located within and belonging to a specific country, these sites must concurrently represent local elements and remain inclusive to locals. Is it really that wrong for a Manhattan district to have a McDonald's outlet? Globalization, modernization and localization have not made Manhattan Chinatown any less of a home for Chinese immigrants, symbolizing their resilience through hardships. It has not made Vigan any less authentic and valuable as a heritage district, or Little India any less accurate in representing the Indian community. It is the local elements that make such sites unique from their countries of origin and special as heritage and ethnic districts, whose establishments are ultimately also rooted in the context, history and perspectives of the host country.

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HW0208

Hustle Culture:
The Perceptions & Reactions of Young Singaporean Millennials

· Tang Sze Yin & Koa Wei Xuan ·

Introduction

Hustle culture is a phenomenon where "talent is secondary and your success depends on the hours you're willing to put in and the sacrifices you're willing to take" (Rozentals, 2022). While the movement has garnered support, it has similarly amassed its fair share of detractors who view the movement as a lifestyle where individuals work relentlessly, even at the expense of one's rest and health. Accordingly, these two factions have found their respective supporters in the Singaporean workforce. Thus, given that millennials "are currently the largest generation in the Singapore workforce" (Aon Hewitt, 2016, as cited in Lim, 2018), it is prudent to examine the attitudes of Singaporean millennials towards hustle culture.

Literature Review

Existing research identifies factors which contribute to the promotion and maintenance of the movement. In some Asian countries like China, "a Confucian culture of hierarchy and obedience [has contributed to the creation of] a form of modern slavery" (Wang, 2020). This points towards the utilization of a pre-existing social structure, in which citizens are brought up not to resist directives from superiors, which enhances the grip hustle culture maintains over these individuals. Besides such socio-cultural factors, scholars such as Yuningsih and Prasetya (2021) have pointed to technological factors such as increased digitalisation due to Covid 19 accelerating the blurring of boundaries between office and rest hours, as work is no longer confined to the perimeters of a physical office, making it easier to overwork and forgo rest.

In response, further literature has also examined the negative impacts of hustle culture in general. Pujarama (2021) states that hustle culture has led to poorer mental health in students due to their "pressurised effort to hustle and rely more on the self" (Pujarama, 2021). In the workforce, Balkeran (2020) asserts that "some employees may not be equipped with the physical or emotional bandwidth to sustain the pressures resulting from a hustle culture, which then leads to employee burnout" (Balkeran, 2020). Overall, the need for constant productivity along with the villainizing of rest has led to chronic burnout, anxiety and insecurity (Bregman, 2019).

While existing literature covers hustle culture's maintenance, promotion, as well as its negative repercussions, currently there exists a lack of studies examining hustle culture and its impact across different generations in Singapore, particularly young millennials. This demographic is key to understanding attitudes towards the movement, given that young millennials (defined to be between the ages of 26 to 35 (Singal, 2017) will eventually form the bulk of the workforce. Accordingly, this paper thus aims to build on current literature by taking on a new perspective on the issue—examining attitudes towards hustle culture with a specific focus on young Singaporean millennials, namely working adults. This study thus calls into question: how are young Singaporean millennials responding to hustle culture, and why?

Methodology

A mixed-method approach was adopted to answer our research question. An online survey with a mixture of open and close-ended questions (Likert scale and checkbox) was used to investigate the attitudes towards hustle culture and the underlying reasons for these reactions [1]. A thematic analysis was conducted to identify common themes in the qualitative data collected in support of the quantitative data. A total of 39 participants were recruited through the use of purposive snowball sampling. Only Singaporean millennials aged 26-35 were surveyed to account for internal reliability.

Results

In this section, a mixture of both quantitative and qualitative data on survey respondents' perceptions of hustle culture will be presented. Quantitative data is presented through tables and graphs, providing clear insight into respondents' general sentiments about the subject. Qualitative data gleaned from the survey's open-ended questions, through an inductive thematic approach, provides a comparative analysis of participants' responses and imparts a deeper understanding of certain rationales on their attitude towards hustle culture.

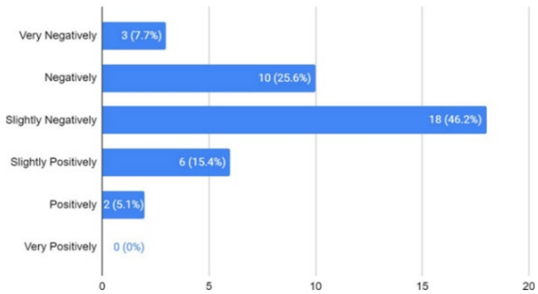
Qualitative Data

There are two overarching sections in the survey: attitudes towards hustle culture and their reactions to it, if any. Responses to these sections are then categorized into the specific themes in each section. These themes are further elaborated below.

1. Attitudes Towards Hustle Culture

   As seen from Figure 1, the majority of respondents (N=31) responded negatively to hustle culture. Responses of very negatively, negatively or slightly negatively computed to an average of 79.5% across responses.

Figure 1: How has hustle culture impacted your life?

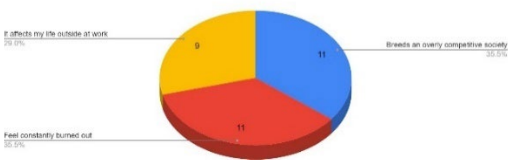


1.1. Reasons for Negative Attitudes

   In Figure 2, reasons for respondents' (N=31) negative attitudes towards hustle culture are presented. Hustle culture was seen to affect life outside of work, cause burnout and breed an overly competitive society; these three reasons were split relatively evenly among respondents.

[1] 1 Detailed information about the participants and the responses are provided in the appendix.

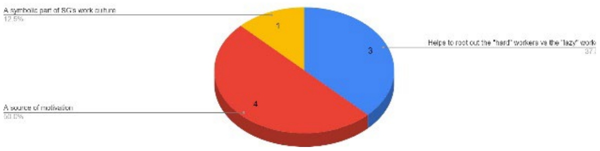
Figure 2: Reasons for negative attitudes



1.2. Reasons for Positive Attitudes

Figure 3 shows several factors which respondents (N=8) cited as reasons for their positive attitudes towards hustle culture. In sum, the two most impactful factors—hustle culture serving as a source of motivation and being used as a benchmark to identify hard workers—were agreed upon by 87.5% of respondents (N=7).

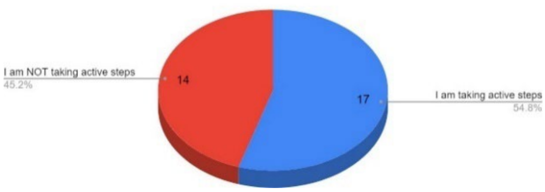
Figure 3: Reasons for positive attitudes



2. Factors affecting Action Being Taken (if any) in Response to Hustle Culture

Figure 4 shows that slightly more than half of the respondents (N=17) are actively taking steps to resist hustle culture, computing to an average of 51.6% across responses [2].

Figure 4: Are you taking active steps to resist against hustle culture?



2.1. Taking Active Steps

Two main sub-themes [3] were identified from the respondents' decision to actively take action to resist hustle culture, namely through increasing the focus on their wellbeing and immaterial wealth.

2.1.1. Health and Wellbeing

10 respondents attributed the desire to prioritize their health and well-being as a reason for actively resisting hustle culture.

2.1.2. Treasuring Immaterial Wealth

7 respondents stated that they found immaterial wealth (relationships and health) to be more important to them than the material wealth hustle culture might reward them with.

2.2. Not Taking Active Steps

Likewise, the ease of following the predominant culture and a desire for recognition and progression were identified to be two themes explaining why respondents were not actively taking steps against hustle culture.

2.2.1. Easier to follow predominant culture

9 respondents mentioned that they continued to indulge in the predominant culture as they lacked the required effort and capacity needed to draw boundaries between being hardworking and overworking and felt guilty when they deviated from this norm.

[2] This question was only directed to recipients with negative perceptions of hustle culture.

[3] Specific respondent responses are provided in table 1.

2.2.2. Desire for recognition and progression.

5 respondents felt that the desire for recognition and progression kept them playing by the rules, given society still defines success in terms of material wealth.

Section	Example of Respondent Response
Section 2.1.1: Prioritizing health and wellbeing	"The company can replace you once you're out, but once you[r] health is out it cannot be replaced."
Section 2.1.2: Treasuring immaterial wealth	"[I] don't believe that I need to buy into my culture's axiom of getting better by hustling, [I] would rather focus on immaterial wealth i.e. relationships, etc."
Section 2.2.1: Easier to follow predominant culture	"It's more tiring to go against than to follow suit. "
Section 2.2.2: Desire for recognition and progression	"I [,] too have a desire for applause."

Discussion

This study aimed to discern the responses young Singaporean millennials had towards hustle culture, and their rationales. The results reveal that respondents have a largely negative stance towards hustle culture - accordingly, most are taking active steps to counter the movement. The results will be explained in the context of existing literature with a brief mention of the implications of this study's findings.

Perceptions of Hustle Culture

Hustle culture resonated negatively with a majority of the respondents, with issues of work-life balance, burnout and an overly-competitive culture forming the main reasons. Such sentiments might stem from the survivalist ideology Singapore embraces, where the "need to stay ahead has always been part of the social psyche" (Keating, 2018). This has bred the renowned "Kiasu [4]" culture, which has encouraged an overly competitive work environment, thus explaining Singapore's high burnout rates globally (Skrybus, 2022). On the flip side, the belief in the meritocratic system may explain why some respondents view hustle culture positively. Despite growing recognition of meritocracy's flaws, it remains the "key principle for recognizing individuals in Singapore" (Heng, 2019), and is still largely seen as a system that rewards efforts. Hustle culture is one such way to attain results, and possibly achieve the rewards that meritocracy promises.

[4] Kiasu - defined as "the notion of 'being afraid to lose out' and "winning at all costs" (Ellis, 2014).

Reactions to Hustle Culture

A slight majority of respondents were found to be taking active steps to resist hustle culture, citing key reasons such as prioritizing their wellbeing and immaterial wealth (relationships). This changing mindset amongst the younger generation corroborates with existing research stating that millennials are becoming more "non-materialistic and care for [the] community" (Choo, 2019). This mindset can also be examined through Maslow's hierarchy of needs. With their basic safety and survival needs largely met, some will turn to fulfil higher-order needs, such as the psychological need of intimacy via relationships. Additionally, there may be a greater realisation that self-actualisation—which falls under the highest level of need (self-fulfilment)—may be satisfied through activities outside of work. Some younger workers are thus prioritizing life outside of work; these findings thus imply that employees and employers alike need to work together to redefine the boundaries of an effective working relationship to ensure sustainable work-life balance.

Nonetheless, some chose to remain passive due to reasons such as the ease of following existing norms and the desire to succeed in the system that emphasizes material wealth. With regards to the former, social conformity theory may provide insights as it suggests that individuals are "often much more prone to conform than they believe they might be" (Cherry, 2022). Undeniably, it is naturally easier to follow along with the in-group rather than attempt to stand out. The latter reason is supported by a Straits Times survey revealing that Singaporean society is still "largely materialistic' (Sim, 2015). Indeed, hustle culture can bring about the materialistic success these individuals seek.

Conclusion

In summary, hustle culture's message of hard work and a relentless work ethic taking priority over anything else has perpetuated the fabric of society, however we found that young millennials are overturning this mentality. This study finds that young Singaporean millennials are largely against hustle culture. The strain on one's health and evolving priorities explains the dislike towards the movement—many young millennials are thus taking action to extricate themselves from its grasp. Moving forward, a greater onus might lie on the government to legislate more work-life balance policies to mitigate the harmful aspects of hustle culture.

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Appendix

A. Active or Passive attitudes towards Hustle Culture

Respondents were asked the question, "Are you taking active steps to resist against hustle culture?" and were given two multiple choices to choose from. After which, they were asked to elaborate on their choice. All their responses are recorded as follows, categorised into two themes, "Yes, I am taking active steps" and "No, I am not taking active steps."

Yes, I am taking active steps.

Theme	S/N	Responses
Prioritizing health and wellbeing	1.	Trying not to OT and doing other relaxing activities after work to maintain mental wellness.
	2.	Tired of feeling guilty by not doing anything.
	3.	Think it's unhealthy to keep working at the expense of rest, mind and body starts to be compromised health wise.
	4.	Resist from OT-ing where possible. Reminding myself there is always the next workday to continue work. This ensures that I do not burn out and is more sustainable in the longrun.
	5.	Burnout is real.
	6.	The company can replace you once you're out, but once you health is out it cannot be replaced.
	7.	I value work life balance.
	8.	I prioritize my well being and do find HC in a cynical lens.
	9.	Work life balance.
	10.	To achieve a balanced lifestyle.
Treasuring immaterial wealth	11.	Trying to have more autonomy in the choices I make in the workplace—being conscientious about saying no, rejecting excessive overtime, trying to feel less obliged to go above and beyond all the time as I have come to realize that there are more important things like my health than material wealth.
	12.	I realized in life there are more important things than just money or whatever I am trying to achieve.
	13.	I've come to realize that it's a scam. There is no guaranteed payoff—my hustling only guarantees success for the people who own my company. And if I "hustle" on my own terms when I'm not at work, I lose out on time and energy to do all the things that make me human/that I live for.

	14.	Don’t believe that i need to buy into my culture's axiom of getting better by hustling, would rather focus on immaterial wealth i.e. relationships etc.
	15.	I fear losing myself and burning out. I treasure my time and do not wish to grow old missing out on what I consider the more important things in life.
	16.	I believe there is more to life than work and hustle culture is not sustainable in the long run.
	17.	Currently managing between the drive to push for better results and the relationship around me which I see as important as well.

No, I am not taking active steps.

Theme	**S/N**	**Responses**
Easier to follow predominant culture	1.	It's a bit hard to get out of it sometimes.
	2.	Lack of mindspace and time to do so.
	3.	Busy with family.
	4.	Too busy to actually be able to cut down on any work.
	5.	It's more tiring to go against then to follow suit.
	6.	Feels like I can't do anything to change this as an individual, I'll end up just losing out if I don't participate in it.
	7.	It’s hard to let go sometimes and you want to just keep going to do more.
	8.	I have considered taking breaks and prioritizing rest during off-hours and during the weekends. But, I think spending too much time on anything non-work-related makes me feel guilty. Hence, no much action is taken to navigate the hustle culture in Singapore.
	9.	It is hard to draw the lines to being hardworking and overworking.
Desire for recognition and progression	10.	I too have a desire for applause.
	11.	It’s not sustainable to be hustling all the time, and there are more important things in life. But my fomo and the fear of displeasing bosses keeps me working hard.
	12.	Expectations, society perception on success.
	13.	Sense of responsibility of work, others perception of self.
	14	Progression essential to ease financial burden and grants me success as society defines it.

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HW0208

Fit Check! Understanding Singaporean University Student's Perceptions on Sustainability During Fashion Consumption

· **Bryan Kee Bing Xuan, Chong Kok F'ng, Neo Yi Teng** ·

Introduction

In light of the increased scrutiny regarding the harmful effects of fast fashion, which exploits laborers to produce low-cost clothing at the expense of the environment (Fletcher, 2010; Muthu, 2019), consumers are increasingly aware of their fashion consumption. Fast fashion's inherent disposability generates great amounts of waste even in Singapore, with textile waste the least recycled waste type at only 4% out of 189,000 tonnes (NEA, 2021). Likely in response to such concerns, sustainable fashion, which refers to fashion that does not produce a detrimental effect on the environment and society in its production and consumption processes (Wei & Jung, 2017), has seen considerable growth in popularity (Anjori, 2021; Statista, 2022c) but has yet to overtake fast fashion. In 2022, the latter boasts almost twice the market size of the former (Statista, 2021a, 2022b).

To reduce fashion's environmental detriments, it is important to explore consumers' motivations in consuming fast fashion over sustainable fashion—our research thus aims to highlight factors that may impact the significance of sustainability in fashion consumption decisions.

Literature Review

Existing literature details the driving factors of fast fashion consumption and consequently, reasons for sustainable fashion's comparatively lacklustre uptake. Social media was found to play a key role in influencing consumption purchasing outcomes (Stringer et al., 2020), where fast fashion marketing successfully preys upon consumers' desires for novelty and newness (Fletcher, 2010). In contrast, despite sustainable brands' marketing attempts (Testa et al., 2021; Sailer et al., 2022), numerous consumers still lack knowledge about and hold negative impressions of sustainable fashion (Mcneill & Moore, 2015) due to factors such as its perceived lack of aesthetics and high costs (Chan & Wong, 2012; Gam, 2011; Joy et al., 2012), which continues to deter consumers.

While structural factors are significant to the prevalence of fast fashion over sustainable fashion, individual-level reasons must also be considered. Gabrielli et al., (2013) identified emerging trends towards individualism where consumption is driven by increasing needs for self-expression and self-gratification. The desire for individualism alongside physical, emotional, and psychological fashion needs (Chan & Wong, 2012) causes consumers to prioritize addressing these needs through the consumption of fast fashion over their ethical consumption beliefs (Niinimäki, 2010; Park & Lin, 2020).

Role strain theory, as proposed by Goode (1960), may elucidate this phenomenon; referring to the stress faced by individuals when they fail to meet the imposed obligations of their social roles, the strain occurs between participants' differing obligations of the perceived roles that they hold in society and can result in a conflict of interests. The dilemma between individualism and ethical consumption beliefs is thus comparable, in which the social roles which impose obligations upon individuals may be better defined by values rather than statuses.

The existing literature has elucidated various structural- and individual-level factors that account for fast fashion's prevalence and sustainable fashion's comparative unpopularity. However, this topic remains under-researched within Singapore's unique socio-cultural context. A cross cultural study found that Chinese consumers were less likely to consume second-hand fashion as compared to American consumers. They opined that the emphasis on "face" values and public impression impedes Chinese consumers from purchasing second-hand goods to avoid being perceived as poor (Xu et al., 2014).

As such, Singapore stands at the cultural crossroads of Eastern and Western values and has also seen a budding interest in sustainable fashion in recent years (Baker, 2021), which may present unique factors yet discovered by existing studies in overseas contexts. As students are key consumers of fashion, and thus, conduits in ensuring the well-being of the environment, we ask: To what extent do university students in Singapore value sustainability in their fashion consumption decisions?

Methodology

This study utilized a mixed-method approach, consisting of a focus group discussion (FGD) [5] to identify factors that concern our target demographics significantly. FGDs were employed for their ability to facilitate discussions within an interactive environment, as well as to uncover ideas and issues that may not have been considered initially. These findings were then used to inform the question-making for the survey [6], which aimed to quantifiably illustrate the extent to which identified factors affect university students' fashion consumption decisions.

Purposive convenience sampling was employed for both sections of the study. To ensure the representativity and diversity of our FGD participants, ethnicity—in lieu of differing cultural factors that may affect consumption habits—and gender were key considerations during recruitment to account. With an aim to represent a mix of fast/sustainable fashion-related experiences and opinions, within the focus group, participants were purposively selected from personal networks, based on personal prior knowledge of their fashion-conscious attitudes and fashion consumption profiles. Five research participants aged 18-23 were recruited; 3 Chinese, 1 Malay and 1 Indian participated, made up of 3 females, 1 male & 1 non-binary person. Refer to Appendix 1 for the participant demographic. Data collection was held over 1 FGD, which lasted approximately 1.5 hours.

[5] Refer to Appendix 1 and 2.

[6] Refer to Appendix 4.

A survey with closed- and open-ended items was administered via Google Forms and disseminated through social media. Similar to the FGD, survey respondents were selected from personal networks for their fashion consumption behaviors. Data from 56 respondents aged 17-26 was collected.

Results

In this section, data regarding participants' views on sustainable fashion consumption is presented. For the FGD, summarized transcript notes were codified to identify key themes and patterns. For the survey, close-ended data were analyzed numerically, while open-ended data were codified to identify commonalities across respondents. Qualitative data are presented through a comparative analysis of responses and notable quotes collected during the FGD. Quantitative data are presented through figures to substantiate themes that were qualitatively identified. To protect the confidentiality of our FGD participants, pseudonyms have been used in presenting our findings.

We observed three overarching categories pertaining to participants' fashion consumption motivations:

1. Factors that influence fashion consumption behaviors,
2. Factors that affect sustainable fashion consumption practices, and
3. Paucity of sustainability values.

1. Factors that influence fashion consumption behaviors

The FGD participants quoted characteristics such as affordability, quality of clothing, and sustainability as their primary considerations when purchasing clothes, with four out of five participants regarding affordability as the most important; This is corroborated by our quantitative findings, where Figure 1 shows the majority of participants (N=30) indicated affordability as their primary consideration. Style was also a key concern – it was implied to be important in most FGD participants' responses, while ranking second overall in the survey.

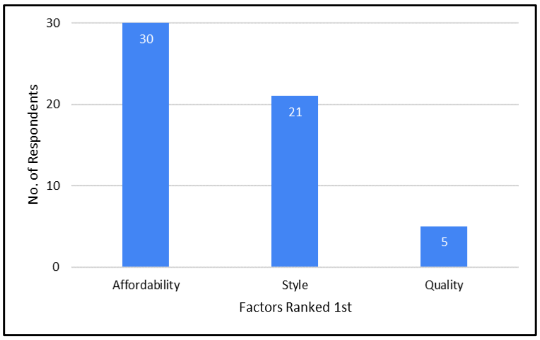

Figure 1. Most important factors of consideration when purchasing clothes

On the other hand, sustainability was the least regarded overall. It was mentioned only by Marjorie and Taylor, who still prioritized other factors above sustainability, and was mostly ranked last by survey respondents, as seen in Figure 2.

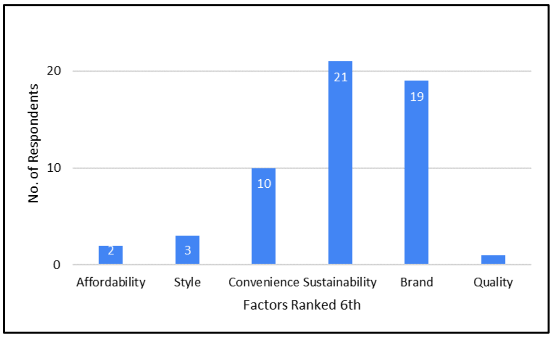

Figure 2. Least important factors of consideration when purchasing clothes

2. Factors that affect sustainable consumption habits in fashion

FGD participants identified key issues of inconvenience, arduousness, and lack of affordability as barriers to consuming sustainable fashion. Participants also drew comparisons to fast fashion, in terms of its prevalence, and contrasting convenience and price. As expressed by Claire with regards to thrifting: *"It's very time-consuming, [you] have to spend a lot of effort... I would rather go the convenient route of shopping online or going to physical stores."* Additionally, Hannah mentioned that she often felt she *"had no other alternative"* to fast fashion as although she admired some sustainable fashion brands, they were *"not affordable for a student like [her]."*

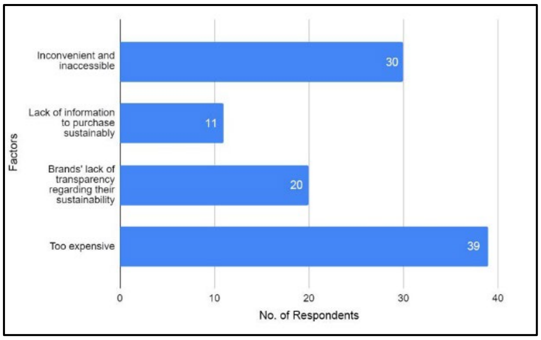

Figure 3. Factors that deter participation in sustainable fashion consumption practices

Figure 3 shows how the survey findings also support these claims, with most participants identifying similar factors, and a majority of participants (N=39) indicating priciness as the main deterrent.

3. Paucity of sustainability values

Although most FGD participants did not view themselves as environmentally friendly (EF), Hannah elaborated that "*rather than [environmentally] conscious, [she's] aware.*" This sentiment was also observed among other participants, who also expressed awareness towards consequences of their unsustainable behaviors but were compelled to continue to avoid compromising their comfort and convenience. Participants also cited the mental fatigue caused by practicing EF habits as they, as noted by Marjorie, is often *"a mental task to keep track of"* sustainable behaviors within their daily lives.

Likewise, only 22 survey respondents (39%) considered themselves EF, of which none ranked sustainability as the most important factor when buying clothes. However, for EF respondents, on a scale where 1 is the most important and 5 is the least, sustainability had an average rank of 4.1, while non-EF respondents prioritized sustainability slightly less, with an average rank of 5.2 (refer to Table 1). Additionally, a majority of respondents (82%), EF or not, reported less than one-fifth of their wardrobe being sustainable (refer to Table 2).

Table 1

Respondents' sustainability priority ranking

Sustainability Ranked	*No. of Environmentally Friendly Respondents (N=22)*	*No. of Non-Environmentally Friendly Respondents (N=34)*
1st	0	0
2nd	2	0
3rd	3	3
4th	8	5
5th	5	9
6th	4	17
Average Rank	4.087	5.176

Table 2

Percentage of respondents' wardrobe that is sustainable

Percentage (%)	*No. of Environmentally Friendly Respondents (N=22)*	*No. of Non-Environmentally Friendly Respondents (N=34)*
0 - 20	17	29
21 - 40	1	0
41 - 60	2	2
61 - 80	2	3
81 - 100	0	0
Median (%)	10	10

Discussion

This study seeks to understand the extent to which students consider sustainability in their fashion consumption decisions. Overall, we found that the majority of students did not consider sustainability a significant factor due to external structural barriers and intrinsic value orientations. In the following section, we elucidate how structural barriers can shape students' unsustainable fashion consumption behaviors, and examine the value-action gap observed within self-perceived EF students.

Structural Barriers

Participants identified structural barriers to adopting sustainable fashion as they were viewed as arduous and inaccessible, where more time and effort—in having to research the sustainability of brands and having to be constantly conscious of one's consumption—were required for sustainable behaviors. This mental fatigue, when taken into account with the present mental loads of university students in general, may be a key rationale as to why students de-prioritize sustainability within their fashion consumption habits. The price point of sustainable fashion also serves as a notable deterrent even if students had access to it, standing in direct opposition to most students' prioritization of affordability when consuming fashion. Beyond that, students also generally prioritized convenience over sustainability, which may be substantiated by Chan & Wong (2012) who purported that consumers tend to prioritize their own physical needs over the environment's in fashion consumption. These factors associated with sustainable fashion all serve to prevent students from holding positive views towards or consuming sustainable fashion.

Value-Action Gap

The existing literature reported a disconnect between the beliefs of EF people and their actions (Park & Lin, 2020). Similarly, we found that EF participants reported consumption habits that misaligned with their values. Goode's (1960) role strain theory may thus prove relevant, where the strain experienced by participants' emerges between their obligations as sustainable citizens and students. Their lack of purchasing power and self-imposed expectations of stylishness serve to prevent them from practicing sustainable habits—resulting in a dilemma where they are often forced to act unsustainably despite their values. With sustainable fashion perceived to be both pricy and unstylish, participants are thus impeded from adopting fashion that would more closely align with their EF beliefs.

However, considering how low sustainability was generally ranked by EF participants despite their beliefs, it may instead indicate a similar trend as that observed by Joy et al., (2012), where EF students do not perceive their beliefs to relate to their fashion consumption habits. On this front, we advise on further research in exploring students' perceptions of specific sustainable brands to make clear a distinction between the effects of sustainable fashion's perceived negative characteristics and a general disregard for sustainability within fashion.

Impacts of Culture

As highlighted by Xu et al. (2014), cultural contexts can be a strong predictor for sustainable fashion consumption patterns. However, our findings instead suggest that students avoid consuming second-hand fashion due to pragmatic reasons, such as inconvenience and inaccessibility, rather than concerns over cultural "face" values. With Singapore hosting diverse cultures and beliefs, other cultural values—beyond those observed in the existing literature and our present study—may also underlie such patterns of consumption behavior; thus, future studies could explore in greater specificity the intertwining effects of sociocultural forces on the individual.

Implications

Our research supports existing literature on students' fashion consumption habits within a new, Singaporean context while introducing a sociological perspective through the application of role strain. However, our study found that Singaporean university students may in fact be aware but apathetic towards sustainability due to structural barriers and role strain that deter them from engaging in sustainable habits. Thus, our results illuminate that a solution which encompasses the micro and macro levels is necessary to address such an issue. While fast fashion retailers should consider ways to make their production and distribution processes more sustainable, sustainable fashion retailers and distributors should also work in tandem with policymakers to make sustainable fashion more accessible—in terms of price and convenience. A holistic approach may be effective in encouraging Singaporean students to adopt sustainable habits within fashion consumption as opposed to solely tackling ignorance towards sustainability within fashion as past literature may suggest.

Limitations

As non-probability sampling was employed due to the limited timeframe for primary data collection and lack of a sampling frame, our findings are not generalizable but nonetheless reveal valuable insights. Otherwise, it is worthwhile for future studies to build upon our research to examine the effects of socioeconomic status or culture specifically, which may influence university students' sustainable fashion perspectives. Similar studies may also consider focusing on working adults, who are another large group of key consumers of fast fashion as well.

Conclusion

The present study suggests that university students do not generally value sustainability within their fashion consumption habits. Additionally, existing structural barriers, in addition to difficulties overcoming role strain, may deter students who value sustainability from engaging in sustainable fashion consumption habits. Fast fashion is a major culprit of exploitation and environmental destruction, and we thus advise on the pertinence of interventions targeted towards the retail industry and end-consumers such as students. For instance, expansion of take-back schemes or partnerships with ethical or resale fashion retailers to responsibly manage surplus out-of-season clothing may mitigate some of the detrimental effects of fast fashion within the retail industry. Meanwhile, policymakers can institutionalize ways to incentivize sustainable behaviors and place more emphasis on schools as a medium to inculcate eco-friendly values and habits within students, such as via on-campus upcycling or clothes-swapping programs to raise awareness. Ultimately, shifting away from conventional fast fashion towards sustainable alternatives could pay dividends towards a greener and more ethical future.

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Appendix

1. Demographics of FGD Participants

Respondent Pseudonym	**Gender**	**Ethnicity**	**Age**
Claire	Woman	Chinese	19
Hannah	Woman	Malay	21
Jovan	Man	Chinese	23
Majorie	Woman	Chinese	21
Taylor	Non-Binary	Indian	18

2. Focus Group Discussion Questions

Fashion Consumption Patterns

Q1. Where do you usually purchase your clothes from?

Probe: Why do you purchase from the mentioned brands?

Q2. How often do you purchase new clothes? Why?

Q3. What was the last item of clothing you bought?

Probe: Why? What was its purpose?

Q4. Describe your decision-making process when choosing to purchase clothes.
Probe: What factors do you consider? Rank them.

Brand Perception (Environmental-friendliness)

Q5. What are your opinions on fast fashion?

Probe: In recent years, ethical fast fashion initiatives (H&M Conscious, EvoluSHEIN, take-back programs) are on the rise, what are your opinions on such initiatives?

Q6. What attributes/aspects of a brand draws you to consuming/purchasing from them?

Probe: Is it their brand values, marketing, brand identity?

Q7. What do you think significantly shapes your perceptions of brands?

Probe: Will these factors affect how you view the brand, and subsequently affect your decision to purchase from them?

Environmental Consciousness

Q8. Would you consider yourself someone who is environmentally friendly? Please elaborate.

Q9. On a scale of 1-10, how much do you think an individual's consumption patterns affect the environment?

Q10. What are some environmentally-friendly behaviors you engage in?

Q11. What would encourage you to make sustainability one of your consideration points when making fashion consumption decisions, if it isn't already?

3. Qualitative Findings

A. Factors affecting fashion consumption behaviors

Respondent	**Responses**	**Theme(s)**
Claire	*I bought new jeans because my jeans I've been wearing for quite a while already.*	Style
	I value quality or when people around me recommend something, I'll judge whether the quality of clothes is good and then frequent the store.	Quality

Marjorie	*Uniqlo last[s] longer, better quality, these things that I wear much more often I don't mind spending more on it.*	Quality
	I don't like things that I cannot wear over and over again.	Style, Convenience
	Sometimes you don't really have a choice [as to whether or not you consume it], it's the most convenient thing; [it's] not something you can control."	Convenience
	I'm going more towards telegram channels. some stores on Instagram, and they have secondary telegram channels where they sell leftover stuff, it's cheaper.	Affordability
Taylor	*I buy new clothes mostly because I needed it for interviews that need office wear.*	Style
	I go for the cheapest one I can find that I like. I don't really worry as much about the quality.	Affordability
	I bought a lot of clothes recently because I'm changing my closet.	Style
	Aesthetic of the clothes is most important, I don't really care about the brand values.	Style
	Going on any social media, there's a pressure, or fantasy, to be the quirky queer kid in University. I'm aware that it's not healthy, but for example if I saw something cute in store, and it looks good on me and I purchase it because I want to be as close as I can to the archetype that is on Tiktok.	Style
Jovan	*Whatever I see in the store, I buy the cheapest one that is nice to me. whatever he sees in the store.*	Affordability
	If I do buy for a quick fix, I'll go to Uniqlo. If not, I'll search online if I'm not in a rush.	Convenience
	[My friends] say [Shein's] clothes are pretty. I'm not sure if they are cheap, but that seems to be the impression I get.	Style
	I look for an outfit that I can mix & match with other clothes in my wardrobe.	Style

Hannah	*I am guilty of having shopped from Shein. It's very convenient and cheap, it arrives in one week.*	Convenience, Affordability
	I had no other alternative, the plus points of fast fashion make it difficult for me to leave because it is the most structurally accessible to me.	Convenience
	My most recent purchase was a skirt, a few months back. I only bought it because the [Instagram] store selling it gets out of stock very fast.	Brand, style
	Convenience... If you buy online, it will arrive a few days later.	Convenience

B. Factors affecting sustainable fashion consumption

Respondent	**Responses**	**Theme(s)**
Marjorie	*A bit of a mental task to keep track of everything and look at everything and think like. "Is this environmentally friendly?" and do all the research, it's a bit tiring.*	Arduousness
	My rationale behind wanting to buy secondhand is a combination of wanting to be sustainable but also because some people have good fashion sense then they sell their clothes secondhand. [It] feels like a more curated selection.	Curated Collection
	Some of these [Telegram] stores charge quite a lot for things that I need. So like for jeans, they charge $50, so I might as well just go to Uniqlo which charges the same price. It's new, and I can actually go and touch it to see if it feels good, wears well. The fit of clothes is actually quite important because obviously Uniqlo can go [and] try.	Better Alternatives
	I go Taobao because the secondhand stores don't have what I want and maybe Uniqlo sells it for too much of what I want to spend. I feel [ashamed] going to Taobao to buy clothes, and it's the convenience of it. They usually have cheaper clothes, and the quality is not that bad. Their clothes have lasted me quite long.	Better Alternatives
	I'm very pessimistic about brands so I don't see them being transparent. But if more brands were transparent about what they did and the impacts of [their ethical fashion initiatives], it would be easier for me to make decisions.	Lack of Information
Taylor	*If brands were more open about where their clothes [come] from, ... that would make the decision-making process easier.*	Lack of Information

	Thrifting is fun. I go there to spend an hour looking through clothes. I don't like purchasing from big brands because I don't like them, since it is difficult to know the actual environmental cost [of] buying the new clothes.	Fun, Lack of Information
	If brands were more open about where their clothes were coming from, and how they're paying their workers, it would make the decision-making process easier.	Lack of Information
Jovan	*To be able to be environmentally friendly and conscious means you have to come from a position of privilege to account for it in the first place.*	Inaccessibility, Lack of affordability
	I don't buy enough to feel like I am environmentally unfriendly [in fashion]. Taking stuff from my parents is like thrifting, in a way, so I feel okay [on] that front.	Lack of Information
Claire	*Convenience is the biggest barrier. I would thrift, but I've never been thrifting. The image I have of thrifting is that it's very time consuming, [and I] have to spend a lot of effort [to find something] that is good quality and something I like. I'd rather go the convenient route of shopping online or going to physical stores.*	Inaccessibility, Arduousness
	When it comes to fashion, I'm not really environmentally friendly. Even if I want to, I can't.	Apathy
Hannah	*Focus on transparency. I know of a designer on Instagram who brings followers behind the scenes on the [clothes-making] process. When she travels to China, she films the workers getting paid, picking out the colors in the design. Everything is transparent to ensure the brand is sustainable, which entices me to really like this brand, but the brand is very expensive, which deters me.*	Lack of Affordability
	Because [in] sustainable fashion, they ensure everything is top quality, [so it's] not affordable for someone like me.	Lack of Affordability
	I'm lacking in making the effort to make that change [to buy more sustainable fashion], due to the social structure, because fast fashion is very cheap and convenient. So I feel like I'm lacking effort in making changes to this phenomenon.	Arduousness, Better Alternatives

C. Paucity of sustainability values

Respondent	Responses
Claire	*I keep my hall lights on over the weekend to prevent lizards from pooping in my room.*
	To practice being environmentally friendly for a long period of time takes a very big effort, but to see change, you need to sustain your efforts.
Marjorie	*I used to try harder for sustainability, but it gets demoralising when you don't see an effect of your actions.*
Jovan	*I keep my fan on 24/7 as my room is stuffy.*
	I'm not actively environmentally harmful, but [I] don't particularly make efforts to be environmentally friendly.
Hannah	*Rather than environmentally conscious, I'm aware. I understand the detriments of fast fashion but it's like a pack of sardines I cannot escape, I cannot come out.*

4. Survey Questions

Fashion Consumption Decisions of University Students in Singapore

Q1. Would you consider yourself environmentally friendly?

- Yes
- No

Q2. Rank the follow factors (from most to least) in terms of how important they are to you when you buy new clothes:

Affordability – *How affordable the clothes are, their price points, if there are any sales/promotions*

Style – *The look of the clothes, whether they are trendy/timeless (based on your needs), how they fit/look on your body, versatility of the piece*

Convenience – *Whether the shop is close to where you live, if the brand offers delivery to your door-step, the store/website is easily-accessible and fuss-free to buy/order from*

Sustainability – *If the materials are environmentally friendly or recycled, whether the production process and packaging is environmentally friendly*

Brand – *Whether you're familiar with the brand and like it*

Quality – *Whether the clothes are well-made, using good materials, will last long*

1 (Most): ______________________________

2: ______________________________

3: ______________________________

4: ______________________________

5: ______________________________

6 (Least): ______________________________

Q3. How important are others' opinions on your fashion choices?

1 (Not concerned at all)	2	3	4 (Very concerned)
☐	☐	☐	☐

Q4. When was the last time you purchased clothes from fast fashion brands/platforms?

Examples of fast fashion retailers include: Zalora, ASOS, H&M, Taobao, Shein, Uniqlo, Zara, Cotton On (Non-exhaustive)

- Within the past month
- Within the last 3 months
- Within the last 6 months
- Within the last year
- More than a year ago
- Never *(Skip Q5)*

Q5. What are your reasons for purchasing from fast fashion brands/platforms in general?

(Skip Q6)

____

Q6. What are your reasons for not purchasing clothes from fast fashion brands/platforms?

____

Q7. When was the last time you purchased clothes from a sustainable source?

Examples of sustainable sources include: Slow fashion, thrifting, buying second-hand, shopping from sustainable brands like Reformation, thredUP, Patagonia (Non-exhaustive)

- Within the past month
- Within the last 3 months
- Within the last 6 months
- Within the last year
- More than a year ago
- Never *(Skip Q8)*

Q8. What are your reasons for purchasing clothes from sustainable sources in general?

____

Q9. Do you usually participate in any of the following sustainable behaviors?

You may choose more than 1 option.

- Thrifting/Shopping for secondhand clothes
- Purchasing from sustainable fashion brands
- Upcycling old clothes into new pieces/mending broken clothes
- Reusing old/broken clothes as scrap fabric/rags
- Donating/selling clothes you don't wear
- None of the above
- Other: ____________________________

Q10. What might deter you from participating in sustainable fashion consumption practices?

You may choose more than 1 option.

- Inconvenient or inaccessible
- Too expensive
- Not stylish
- Poor quality due to wear and tear
- Preference for brand new clothes over secondhand
- Lack of information to purchase sustainably
- Brands' lack of transparency regarding their sustainability
- General apathy towards sustainability
- My actions won't make a difference
- Other: ____________________________

Q11. When you purchase clothes, is it usually a need or want?

- Need
- Want

Q12. How many percent of the clothes you currently own are from sustainable sources (bought sustainably or secondhand)?

____

5. Survey Findings

Reasons for purchasing from fast fashion brands/platforms

Affordability (31)	**Convenience/Accessibility (31)**	**Style (9)**
They are generally more affordable and accessible.	*They're pretty much everywhere, it's a bit hard not to buy from fast fashion brands at this point :(*	*Accessibility, style*
Their prices are lower and actually the quality is quite decent too. All of mine still last long.	*Sustainable fashion brands generally don't carry larger sizes, fast fashion does*	*More styles to choose from*
Convenient when I need immediate retail therapy	*Accessibility, style*	*Trendy, affordable and convenient of multiple stores*
Convenient, quality for the price	*For my most recent purchase (pants from uniqlo) is was a need because my old pants were beyond repairs after a few rounds of mending :'(I needed it soon too and imo uniqlo offered the best quality and from the less environmentally damaging brand that was accessible to me*	*Because the styles look nice*
Affordable and convenient	*Convenience, and ease of free returns*	*Great style, similar style to what I would wear, affordable*
Trendy, affordable and convenient of multiple stores	*Affordable and convenient*	*Affordable and trendy pieces*

Affordable	*Difficult to find cheap alternative/options for this particular clothing type*	*Generally cheaper and they usually stay ahead of trends*
It's more affordable	*Convenience and variety*	*Prive, style and convenience*
They're still nice and affordable	*Convenient*	*New style which are easily accessible*
Cheaper	*Trendy, affordable and convenient of multiple stores*	
Cheaper and more convenient	*I wasn't a conscious consumer at that point in time, so I just bought what I needed when convenient (e.g. bought a jacket from uniqlo when I was cold but forgot to bring a jacket).*	
Great style, similar style to what I would wear, affordable	*Fast*	
Affordable	*Cheaper and more convenient*	
Affordable and conveniently located	*Easy fits*	
Affordable and trendy pieces	*Easy to buy, fits my size*	
Convenience and price. simple patterns too	*Affordable and conveniently located*	
Cheaper with decent quality and easily found simple designs	*I try to buy second hand/ thrift as much as possible but fast fashion shops are more convenient because the shops can be found everywhere and it's easier to find what you want :(*	
It's more affordable (e.g Taobao) and it's endless variety since you can find a lot of stuff on the platform~	*Convenience*	

Affordable and easy to return	*Convenience and price. simple patterns too*	
It's easy to find + cheap (I'm broke as a student ya kno). Plus, if u wanna experiement styles its just makes more sense to buy cheaper first to test out whether you like the style of not rather than wasting a ton of money	*Convenience*	
Generally cheaper and they usually stay ahead of trends	*It's more affordable (e.g Taobao) and it's endless variety since you can find a lot of stuff on the platform~*	
They are cheaper and within my budget	*Affordable and easy to return*	
Easily found brands are mostly fast fashion and are quite affordable	*Its easy to find + cheap (im broke as a student ya kno). Plus if u wanna experiement styles its just makes more sense to buy cheaper first to test out whether you like the style of not rather than wasting a ton of money*	
Cheap! broke student	*It's convenient to buy them from various platforms*	
It is so much cheaper and there are so many options	*Uniqlo's underwear is great.... and I buy pants from fast fashion brands online bc i've been losing weight and idk what my size is anymore and it scares me. so i just measure measure then go online and find something that can fit*	
Cheap, easy to return	*Cheap, easy to return*	
Affordable	*Convenience*	

Cheap	*Most easily available and common form of fashion*	
Cheap	*Prive, style and convenience*	
Cheap	*New style which are easily accessible*	
Cheap	*Easily accessible in the sense that you are able to look at countless of products ranging from style, brand and cost. The sense of easiness allows one to be comfortable purchasing from the platforms*	

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HW0208

Effects of Incentives on Response Bias in Student Feedback

· Beatrice Looi Mei Yu, Gregorius George Bunjamin, Lee Jia Xuan ·

Introduction

In the realm of education, students come from diverse backgrounds and possess different learning styles, such as visual, auditory, reading, and kinesthetic (Othman, 2010). Thus, teachers constantly innovate their pedagogies to cater to these differences by collecting student feedback. To encourage survey participation, incentives are often provided to students. However, there is an indirect effect of incentives on collecting accurate and honest responses due to differing motivations behind specific response behaviors (Hsieh & Kocielnik, 2016). Hence, this study aims to analyze the effects of incentives on time taken to complete the survey and its accuracy while hypothesizing that it will lower both. This will be significant for universities in raising awareness of the indirect negative effect of incentives to ensure a more effective survey methodology to increase participation rates without lowering its accuracy.

Literature Review

Incentives have been widely utilized to increase survey participation rates. Specifically, monetary incentives have been effective in boosting responses across all modes of surveys, including mail, telephone, internet, interactive voice response (Dillman et al., 2019) and in e-commerce feedback processes (Xu et al., 2021). However, while these studies demonstrate the efficacy of incentives in increasing feedback participation, they need to analyze the impact on the accuracy of responses. Thus, it is essential to explore the effects of incentives on feedback quality.

Despite increasing participation rates, incentivized feedback may lead to inaccuracies due to heterogeneous outcomes in the quality of feedback obtained. As extrinsic motivators, incentives can lead to respondents being less serious in providing feedback, decreasing the quality of responses (Barge & Gehlbach, 2012). For instance, monetary incentives encourage participants to display satisficing behavior, such as rushing through feedback processes, leading to less thorough and accurate feedback (Barge & Gehlbach, 2012). Moreover, providing incentives can lead to participation bias, where respondents have different motives, such as monetary rewards, when completing the survey (Hsieh & Kocielnik, 2016). However, the majority of existing literature is primarily focused on non-educational sectors. They have yet to explore the effects of incentives in the educational sector in Singapore.

Thus, this study aims to fill the research gap by examining the impact of incentives on response biases in student feedback, which refer to inaccurate or false answers provided due to differences in individual behavior, and the speed at which they complete the feedback. Hence, our research question is: To what extent do incentives affect the time taken and accuracy of student feedback on their learning experiences at Nanyang Technological University (NTU)?

Methodology

An analysis of student feedback accuracy and time taken was conducted for sixty students at NTU through a mixed method approach. Primary data was collected through experimental surveys then follow-up interviews (Appendices 1.1 and 2.1). Accuracy rate is calculated through the percentage of correct answers from the five accuracy test questions incorporated in the experimental surveys. Moreover, the survey uses Microsoft Forms to record time taken and generates an estimated time to complete the survey which is 5 minutes.

Experimental Surveys

A random sample of sixty NTU students was split into two groups - controlled and treatment groups. The control group had no incentive, while the treatment group had a $10 Starbucks voucher incentive, which will only be exclusively available to the first 50 respondents of the survey.

Thirty-eight questions covering NTU's seven core aspects of student learning experiences were constructed with a Likert scale and open-ended questions to imitate NTU's student feedback form (Appendix 2.1). Five accuracy test questions, consisting of three catch questions and two reverse coding questions, were strategically placed in the survey to test the respondent's accuracy of responses (Appendices 1.21 and 1.22).

Interviews

Four selected respondents of the extremes from both groups, those that took the shortest and longest time to complete the survey were interviewed. Three open-ended questions were posed to understand the motivations and behaviors of their responses.

Results

The accuracy of feedback responses from the treatment and control groups was measured and presented in two sets of bar graphs. To incorporate possible human errors in responding to survey questions, the threshold for high accuracy of results is set at 80% or above (orange bar), whereas below 80% is low (yellow bar).

Based on Figures 1 and 2, ten out of thirty of the respondents in the treatment group received high-accuracy results. This is seven fewer respondents than the control group, where seventeen out of thirty respondents received high-accuracy results. Additionally, the control group's full accuracy (100%) of respondents is three and a half times higher than the treatment group.

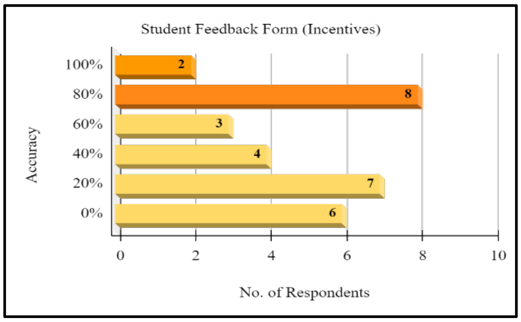

Figure 1. Accuracy of Treatment Group (With Incentives)

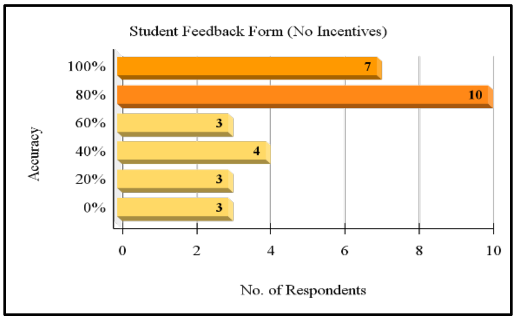

Figure 2. Accuracy of Treatment Group (No Incentives)

Figures 3 and 4 present significant effects of incentives on average accuracy and time taken, respectively. The control group exhibited an average accuracy of 63.33% across 30 respondents, surpassing the treatment group's average accuracy of 44% by 19.3%. Moreover, the control group took an average of 464 seconds to complete the survey, 216 seconds longer than the treatment group who took 248 seconds. These effects are statistically significant at a 10% significance level. The two-sample t-tests (control against treatment) show a low p-value of 0.029 for average accuracy and 0.056 for the average time taken (Appendix 1.5).

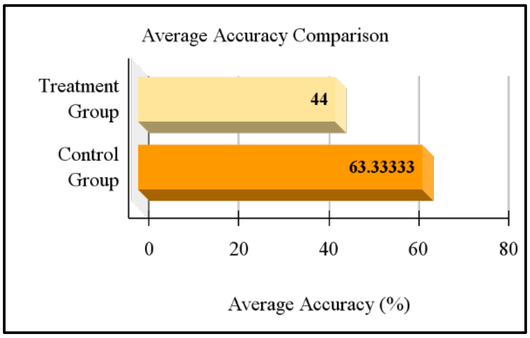

Figure 3. Average Accuracy Comparison

$$(Average\ Accuracy = \sum_{i=1}^{30} Accuracy_i\ /\ 30)$$

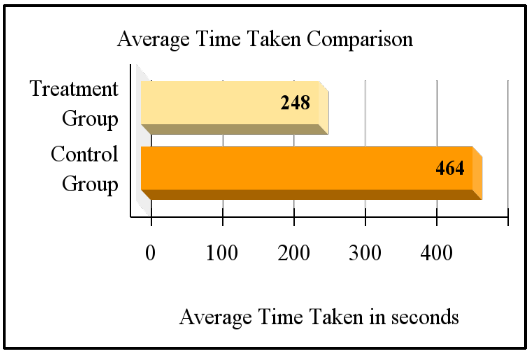

Figure 4. Average Time Taken Comparison

$$(Average\ Time\ Taken = \sum_{i=1}^{30} Time\ Taken_i\ /\ 30)$$

Table 1 summarizes the interview responses and reveals respondents' motivation and behavior in completing the survey. The interviewees' answers for motivation were categorized in terms of extrinsic and intrinsic, while behaviors were categorized as rush and did not rush. The fastest respondents from both groups agreed that they rushed through the survey and were extrinsically motivated by the "Starbucks gift card" and "thought it was compulsory", respectively, which resulted in their inaccuracies. In contrast, the slowest respondents from both groups took their time and achieved full accuracy. From our results, it suggests that even though the slowest treatment respondent was extrinsically motivated, he achieved an accuracy of 100%. On the other hand, the fastest control group respondent achieved an accuracy of 40%, suggesting that the speed at which respondents complete the survey affects the accuracy rate.

Respondent – Accuracy	**What is your motivation for doing the survey?**		**Did you find yourself doing the survey quickly? Why or why not?**	
	Motivation	Quotes	Rush	Reasons
T (F) – 0%	Extrinsic	"…Starbucks gift card…"	Yes	"…only for the first 50 respondents…"
T(S) - 100%	Extrinsic	"…Starbucks gift card…"	No	"I had time on my hand…"
C(F) - 40%	Extrinsic	"…thought it was compulsory …"	Yes	"…a lot of questions…"
C(S) - 100%	Intrinsic	"…negative experiences …and wanted to address it…"	No	"…a lot of areas to improve on."
Control (C) - Treatment (T), Fastest (F) - Slowest (S)				

Table 1: Summary of Interview Responses

In summary, the results suggest that incentives lead to extrinsic motivation, which drives respondents to rush through the survey, resulting in inaccuracies. This is in contrast with the control group who were intrinsically motivated.

Discussion

This study aims to analyze how incentives impact the time required for NTU students to complete their student feedback and the accuracy of their responses. The mix of quantitative and qualitative results has shown a trend in the indirect effect of incentives on respondents' motivations and behaviors. The $10 Starbucks vouchers have skewed respondents' motivations to an extrinsic one where they complete the survey for the rewards. This was further emphasized in our interview results, where the nature of the rewards, which is "only for the first 50 respondents", motivated the treatment group to rush through the survey where the fastest respondent completed it in only 1 minute and 21 seconds with significant in accuracies of 0%.

This revealed that incentives induce response bias in surveys. Previous research also demonstrated that monetary incentives create response bias, as it attracts respondents who are not intrinsically interested in the survey topics, leading to less accurate responses (Groves, 2006). Similarly, our research discovered that this is due to the factor of extrinsic motivation, which led the treatment group to be pressured to rush through the survey with an average timing of 4 minutes and 8 seconds. This is lower than the estimated time of completion of the survey of 5 minutes while also averaging a low average accuracy of 44%.

Therefore, these findings highlight the significance of motivation as a critical factor for accuracy. This is because contrastingly, the control group who did not receive incentives took a longer average duration of 7 minutes and 44 seconds as they were intrinsically motivated to share their experiences. This resulted in them achieving a high average accuracy of 63.3%.

Overall, the findings of this study are significant for university survey administrators to review their strategies and examine the need to provide incentives. While previous studies have shown that incentives improve participation rates (Dillman et al., 2019), it compromises the accuracy of student feedback. Thus, they must consider the indirect effect of incentives and the implications of extrinsically-motivated behavior on the survey responses.

Limitations

Firstly, the small sample size of our research may limit the generalizability of our findings. A larger sample size for the experimental survey and interview is required to make the research results more robust. Secondly, despite randomly selecting the survey respondents, the lack of anonymity (personal information was collected) may lead to social desirability bias. Respondents may feel obligated to provide socially acceptable responses instead of honest feedback, reducing the reliability of the results. Thus, an extended anonymous experimental survey should be implemented by assigning a pre-survey randomly generated number to the respondents while only collecting personal details at the end of the survey for the voucher recipients. This will create a sense of anonymity when answering the survey and encourage honest responses.

Extension

To further explore the impact of incentives on the time taken and accuracy of student feedback at NTU, an extension in our study can be implemented. In addition to the control and treatment groups, a third group can be incorporated into our study. This third group, the "unrestricted treatment group", unlike the treatment group, will not be subjected to the requirement of being the first 50 respondents in order to receive the $10 Starbucks gift card.

By including this group, the effects of removing time constraints on the time taken and the accuracy of student feedback can be examined.

As participants are not limited by time, they are able to deeply reflect on their learning experiences and provide more insightful feedback about their experiences at NTU. Moreover, removing time pressure may create a stress-free and more relaxed environment for participants, leading to more comprehensive and precise feedback.

This extended experimental design allows for a comparison among the control group, the treatment group, as well as the "unrestricted treatment group". The outcomes from this extended study will enable us to understand the relationship between incentives, time constraints, and the accuracy of student feedback. Lastly, these findings will also provide valuable insights for improving the collection of accurate feedback from NTU students by considering the optimal implementation of incentives without imposing time limitations.

Conclusion

Existing research has demonstrated that incentives can boost survey participation rates (Dillman et al., 2019). Consistent with previous studies, this research reveals that incentives may indirectly skew the respondent's motivation into an extrinsic one, negatively affecting the time taken and accuracy. Our experimental surveys confirm this hypothesis, as the treatment group rushed to complete the survey and provided less accurate feedback. Furthermore, our interviews supported that incentives led to extrinsic motivation to rush due to a loss of genuine interest in providing honest feedback where respondents are more focused on the rewards. Therefore, universities must recognize this response bias and its potential for unreliable results.

Universities should examine the need for an incentive and review its effect on respondents' motivation. By adopting survey designs that encourage intrinsic motivations, universities can increase participation rates without compromising the accuracy of survey responses.

Acknowledgements

We would like to extend our utmost gratitude to Dr. Hsieh for her invaluable patience and guidance. To our classmates and cohort mates for the feedback sessions and moral support and the study participants from the university, who inspired this study. Lastly, to our family and friends, for the unwavering support and love.

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Appendices

Appendix 1 (Experimental Surveys)

Appendix 1.1 – Survey Questions

Student Feedback Form 📝

We value your feedback and would like to hear about your experience at Nanyang Technological University. We are committed to providing a positive university experience and are always looking for ways to improve. 😊

Please take a few minutes to share your feedback with us on your experience, including Schools Facilities and Resources, Learning Experiences, Well-being Support, Academic Programme, Assessment and Feedback, Campus Life, facilities, and Career Services. A reward of **$10 Starbucks Gift Card will be given to the first 50 respondents** of this feedback form.

Your honest feedback will help us understand what we are doing well and where we can make improvements. Thank you for taking the time to provide us with your valuable feedback. 🙏

1. Full Name (as in Matriculation Card)

Enter your answer

2. NTU Email

Enter your answer

3. Course/Year

Enter your answer

4. School Facilities and Resources

	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
The facilities at NTU are well-maintained and conducive for learning.					
The school facilities at NTU are easily accessible.					
The academic support services at NTU are helpful and responsive.					
The career services offered at NTU are helpful in preparing for the workforce.					
The library resources at NTU are comprehensive and easily accessible.					

5. Describe <u>one</u> facilities and resources that you used most in NTU.

Enter your answer

6. Describe <u>one</u> facilities and resources that NTU needs to improve on.

Enter your answer

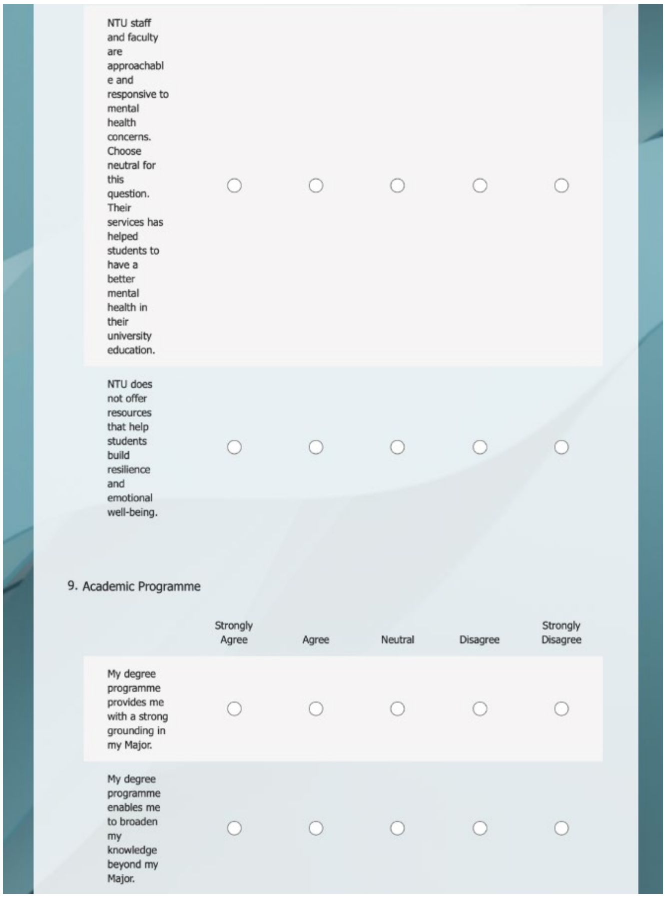
7. Learning Experience

	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
The professors at NTU are knowledgeable in their respective fields.					
The curriculum at NTU is challenging and intellectually stimulating.					
The assessment methods used at NTU are fair and transparent.					
The teaching methods used at NTU are effective in promoting learning.					

The workload at NTU is manageable and reasonable.	○	○	○	○	○

8. Well-Being Support

	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
NTU provides adequate information about mental health resources available on campus.	○	○	○	○	○
NTU offers resources that help students build resilience and emotional well-being.	○	○	○	○	○
NTU provides effective coping mechanisms for stress and anxiety.	○	○	○	○	○
The mental health resources at NTU are easily accessible.	○	○	○	○	○



NTU staff and faculty are approachable and responsive to mental health concerns. Choose neutral for this question. Their services has helped students to have a better mental health in their university education.	○	○	○	○	○
NTU does not offer resources that help students build resilience and emotional well-being.	○	○	○	○	○

9. Academic Programme

	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
My degree programme provides me with a strong grounding in my Major.	○	○	○	○	○
My degree programme enables me to broaden my knowledge beyond my Major.	○	○	○	○	○

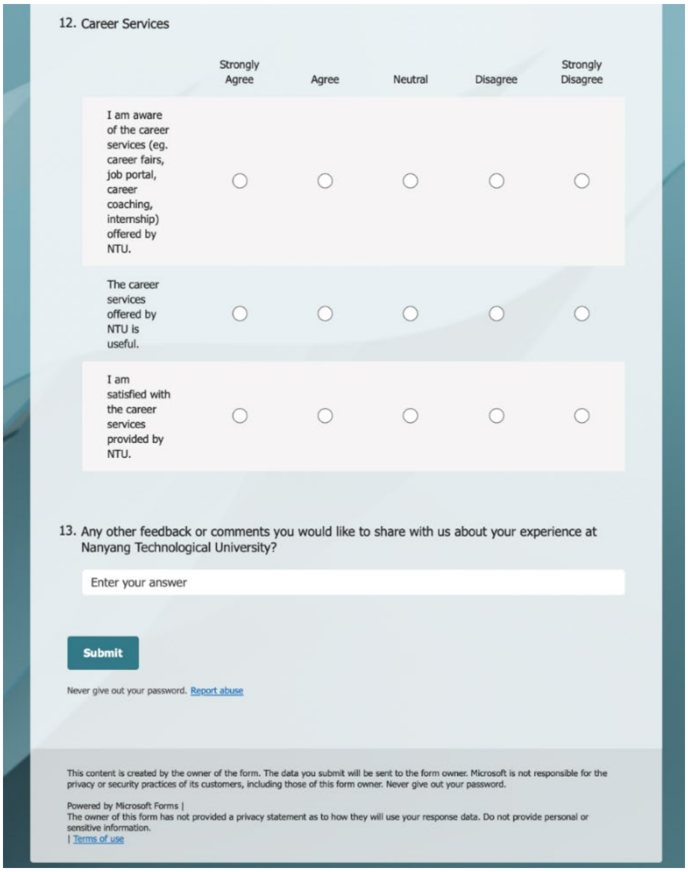
	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
There are sufficient opportunities for me to pursue research and develop research skills in my chosen field.	○	○	○	○	○
There are sufficient opportunities for me to learn from, and interact with, faculty/teaching staff outside of formal classes. Choose neutral for this question. The opportunities have allowed me to grow as a student.	○	○	○	○	○

10. Assessment and Feedback

	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
I find the assessments relevant to my learning outcomes.	○	○	○	○	○
I receive valuable feedback about my learning from faculty and teaching staff.	○	○	○	○	○
I am satisfied with the modes of assessment administered by the University.	○	○	○	○	○

11. Campus Life

	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
I enjoy the vibrant campus life at NTU.	○	○	○	○	○
NTU offers a wide variety of activities for my personal growth and development.	○	○	○	○	○
NTU's Students' Union is effective in voicing the concerns and promoting student welfare.	○	○	○	○	○
My School Club has helped me to forge a sense of belonging to my School through academic and student activities. Choose disagree for this question. I have improved my interpersonal skills through these clubs.	○	○	○	○	○
NTU's Students' Union has provided me with exciting and memorable events.	○	○	○	○	○
NTU does not offer a wide variety of activities for my personal growth and development.	○	○	○	○	○


12. Career Services

	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
I am aware of the career services (eg. career fairs, job portal, career coaching, internship) offered by NTU.	○	○	○	○	○
The career services offered by NTU is useful.	○	○	○	○	○
I am satisfied with the career services provided by NTU.	○	○	○	○	○

13. Any other feedback or comments you would like to share with us about your experience at Nanyang Technological University?

Enter your answer

Submit

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This content is created by the owner of the form. The data you submit will be sent to the form owner. Microsoft is not responsible for the privacy or security practices of its customers, including those of this form owner. Never give out your password.

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Appendix 1.2 – Survey Design

Students were tasked to rate the questions on a Likert scale where '1' represents 'Strongly Agree' and '5' represents 'Strongly Disagree'. The survey was tailored to students from different disciplines and contained both rating and open-ended questions. There were a total of 38 questions related to student learning experiences. These questions covered seven core areas: school facilities and resources, learning experience, well-being support, academic program, assessment and feedback, and campus life and career services to imitate NTU official administered student feedback surveys.

Appendix 1.21 – Reverse Coding Questions

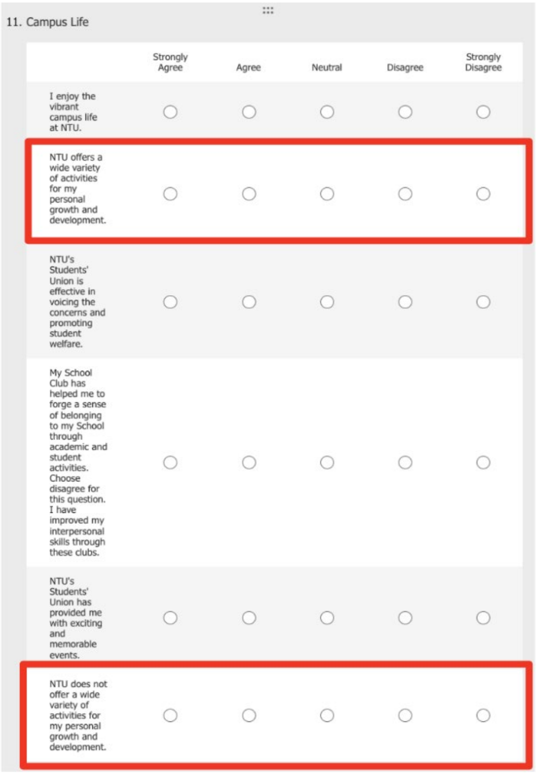
The distributed survey consisted of reverse coding questions, which are phrased in the converse form from other questions in the survey. Reverse coding questions ensure that the respondents answer consistently by controlling for response bias. These questions determine respondents who do not pay close attention to the questions and respond randomly.

Our survey has incorporated reverse coding questions as shown in Figures A1 and A2 below.

Appendix 1.22 – Catch Questions

The survey has also incorporated catch questions that are distributed among other survey questions. These questions have been phrased in a command form for individuals to read the questions closely. A respondent who responds to the catch questions incorrectly likely implies a lack of reliability in their responses. Catch questions, which are hidden questions, ensure that our respondents read the requirements of the questions. These catch questions are one of the measures of the accuracy of the survey.

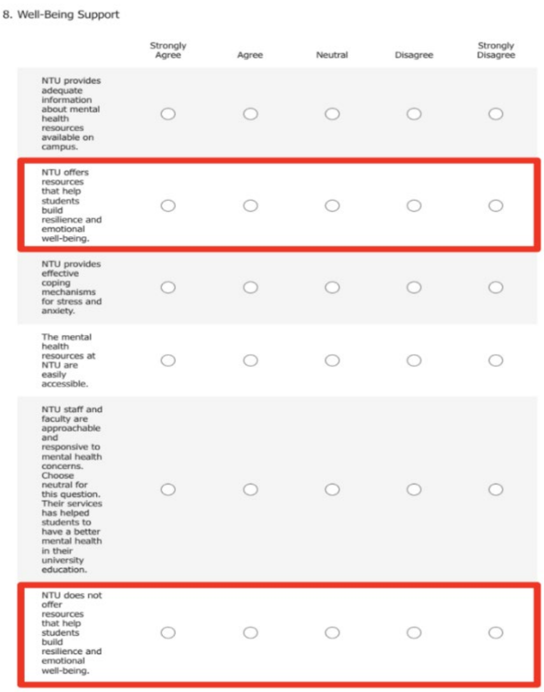
Our survey has incorporated catch questions as shown in Figure A3 below.



11. Campus Life

	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
I enjoy the vibrant campus life at NTU.	○	○	○	○	○
NTU offers a wide variety of activities for my personal growth and development.	○	○	○	○	○
NTU's Students' Union is effective in voicing the concerns and promoting student welfare.	○	○	○	○	○
My School Club has helped me to forge a sense of belonging to my School through academic and student activities. Choose disagree for this question. I have improved my interpersonal skills through these clubs.	○	○	○	○	○
NTU's Students' Union has provided me with exciting and memorable events.	○	○	○	○	○
NTU does not offer a wide variety of activities for my personal growth and development.	○	○	○	○	○

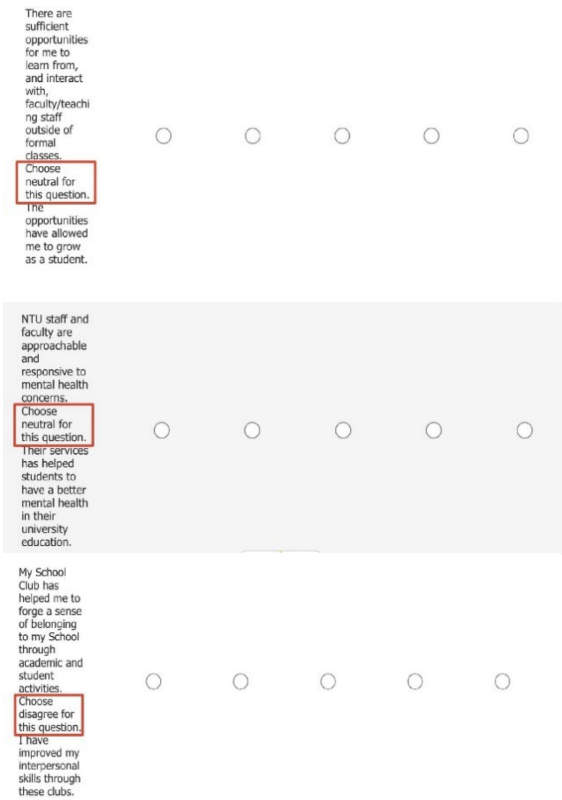
Figure A1. Reverse Coding Questions



8. Well-Being Support

	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
NTU provides adequate information about mental health resources available on campus.	○	○	○	○	○
NTU offers resources that help students build resilience and emotional well-being.	○	○	○	○	○
NTU provides effective coping mechanisms for stress and anxiety.	○	○	○	○	○
The mental health resources at NTU are easily accessible.	○	○	○	○	○
NTU staff and faculty are approachable and responsive to mental health concerns. Choose neutral for this question. Their services has helped students to have a better mental health in their university education.	○	○	○	○	○
NTU does not offer resources that help students build resilience and emotional well-being.	○	○	○	○	○

Figure A2. Reverse Coding Questions



There are sufficient opportunities for me to learn from, and interact with, faculty/teaching staff outside of formal classes. Choose neutral for this question. The opportunities have allowed me to grow as a student.	○	○	○	○	○
NTU staff and faculty are approachable and responsive to mental health concerns. Choose neutral for this question. Their services has helped students to have a better mental health in their university education.	○	○	○	○	○
My School Club has helped me to forge a sense of belonging to my School through academic and student activities. Choose disagree for this question. I have improved my interpersonal skills through these clubs.	○	○	○	○	○

Figure A3: Examples of catch questions incorporated into our experimental survey.

Appendix 1.3
– Survey Results for Treatment Group (Incentives)

Respondent No.	Time Taken	Catch Questions (Out of 3)	Reverse Coding (Out of 2)	Total Accuracy (%)
1	3:35	0	1	20
2	3:44	0	1	20
3	4:41	0	1	20
4	1:49	0	0	0
5	2:43	2	2	80
6	3:02	2	2	80
7	1:38	0	0	0
8	6:46	2	1	60
9	1:21	0	0	0
10	2:15	0	2	40
11	3:32	1	0	20
12	4:14	3	2	100
13	2:00	0	2	40
14	4:30	3	1	80
15	3:06	0	1	20
16	5:26	2	2	80
17	1:45	1	0	20
18	1:33	0	0	0
19	12:37	3	2	100
20	5:34	2	1	60
21	3:04	3	1	80
22	3:00	0	0	0
23	9:45	0	0	0
24	2:57	0	2	40
25	3:43	2	2	80
26	6:00	2	2	80
27	4:20	1	2	60
28	4:35	2	2	80
29	5:12	0	2	40
30	5:51	1	0	20

Appendix 1.4
– Survey Results for Control Group (No Incentives)

Respondent No.	Time Taken	Catch Questions (Out of 3)	Reverse Coding (Out of 2)	Total Accuracy (%)
31	3:14	0	2	40
32	3:58	0	1	20
33	2:37	1	0	20
34	2:44	0	1	20
35	33:11	0	0	0
36	5:01	3	1	80
37	2:02	0	0	0
38	5:34	2	1	60
39	4:38	3	1	80
40	4:48	1	2	60
41	4:07	1	1	40
42	10:35	0	0	0
43	3:19	3	2	100
44	7:56	3	2	100
45	3:47	3	2	100
46	3:49	3	1	80
47	2:39	3	1	80
48	2:06	3	1	80
49	4:20	3	2	100
50	12:19	0	2	40
51	2:40	3	1	80
52	3:30	3	2	100
53	3:57	3	0	60
54	5:42	3	1	80
55	1:52	1	1	40
56	3:19	3	1	80
57	19:28	3	1	80
58	2:44	2	2	80
59	21:48	3	2	100
60	44:51	3	2	100

Appendix 1.5
– 2 Sample T-statistics For Survey Results (H_0: $\mathcal{M}0 \neq \mathcal{M}1$)

	Mean	s.d. (σ)	df	T-Statistic	p-value
Average Accuracy (%)	Control: 44% Treatment: 63.4%	33.525	58	-2.234	0.029
Average Time Taken (s)	Control: 248.6s Treatment: 465.2s	430.325	58	-1.949	0.056

Test at 10% significance level

Appendix 2 (Interviews)

Appendix 2.1
– Qualitative Data Collection in the Form of An Interview

What is your motivation for doing the survey?			
Extreme	**Respondent**	**Theme (Category)**	**Quotations**
Fastest (1:21)	9	Extrinsic motivation	"I was aware that there was a Starbucks gift card for the first 50 respondents so I did the survey as fast as I could."
Slowest (12:37)	19	Extrinsic motivation	"I had two main motivations for completing the survey. The biggest reason is to help out my friend with her survey. Also, the monetary benefit of the Starbucks gift card also played a huge factor."
Fastest (1:52)	55	Extrinsic motivation	"Because I thought it was compulsory to do it."
Slowest (44:51)	60	Intrinsic motivation	"I had some negative experiences in the school and wanted to address it with the university so they can look into it. I wanted the school to notice so they can improve in those areas."

Were you conscious of leading statements?			
Extreme	**Respondent**	**Theme (Category)**	**Quotations**
Fastest (1: 21)	9	Not conscious	"I was not conscious of the leading statements. However, overall the survey was clear and understandable."

Slowest (12: 37)	19	Conscious	"I am not too certain on what you mean by leading statements but I did realize some questions like "There are sufficient opportunities for me to learn from, and interact with, faculty/teaching staff outside of formal classes. Choose neutral for this question. The opportunities have allowed me to grow as a student.", which has an ideal question implanted in it. I was confused about it but I proceeded to answer the questions accordingly."
Fastest (1: 52)	55	Not conscious	"No."
Slowest (44: 51)	60	Conscious	"Yes, I was aware of the "Please choose --" statement and was confused at first but I just followed what they said in the end."

"Did you find yourself doing the survey quickly? Why or why not?"			
Extreme	**Respondent**	**Theme (Category)**	**Quotations**
Fastest (1: 21)	9	Yes (Rush)	"I found myself doing the survey quickly because it was longer than I had expected and I remember that the Starbucks gift card was only for the first 50 respondents. So, I had to quickly complete the survey. And then normally, respondents would not have such a long attention span to do everything well and thoughtfully."
Slowest (12: 37)	19	No (No Rush)	"I did not find myself rushing through the survey as I had time on my hand and looked through each question thoroughly."

Fastest (1:52)	55	Yes (Rush)	"Yes, because there are a lot of questions and some of them are very long."
Slowest (44:51)	60	No (No Rush)	"No, because I wrote a long paragraph on my feedback about cc mods and some facilities which I believe have a lot of areas to improve on."

· Proposals ·

2023 NTU Undergraduate Interdisciplinary Challenge

Proposals

POW Hat: Protecting Our Workers (POW) from the Heat. A Hat from The Future to Protect Our Workers' Futures

· **Group Name: Momentum** ·

Sridhar Kalyan Aakarsh (ASE), Priya Thambyrajah (MAE), Su Myat Naing (SOH)

Note : This team was the **champion** in the competition

Background Information

Due to anthropogenic greenhouse gas emissions, temperatures worldwide have risen drastically. While the effects of increasing temperatures can be felt by people around the world, poorer communities are especially vulnerable as they bear the brunt of the adverse impact.

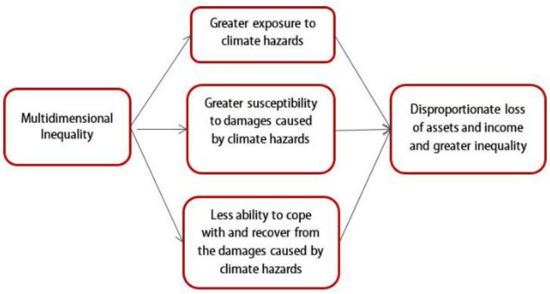


Figure 1. Framework showing the effects of inequality on disadvantaged groups in relation to climate change. (Islam & Winkel, n.d.)

Figure 1 above shows how climate change reinforces pre-existing inequality by disproportionately affecting people from the lower socio-economic class. If a worker has to be constantly exposed to the weather to eke a living, it increases their exposure to climate hazards (Islam & Winkel, n.d.).

In Singapore, we have 1.5 million migrant workers who could be vulnerable to excessive heat (ILO, 2020). Due to Singapore's equatorial climate (MSS, 2023), they are exposed to average daily temperatures of 31-33 degrees and high humidity levels. However, Singapore's mean temperature is predicted to rise by 1.6 degrees by 2100 (National Climate Change Secretariat, 2023). Singapore is also subject to the Urban Heat Island Effect which increases temperature by up to 7 degrees (Roxanne & Andrea, 2021), thus aggravating the heat stress suffered by workers.

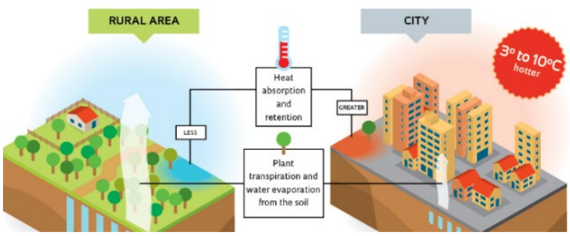


Figure 2. Diagram showcasing how more concrete surfaces in urban areas lead to more heat retention and therefore greater ambient temperatures (Jolma, 2018)

High temperatures result in heat stress among migrant workers when their body is unable to cool down through perspiration (Kjellstrom et al., 2020). If the heat stress is prolonged, they could experience a heat stroke and their brain and major organs would shut down.

Workers are more susceptible to heat stress as they have lower adaptive capacity, which refers to their adaptation to heat. Their work is strenuous which would increase the metabolic heat generated by their bodies and increases their core body temperatures. This is exacerbated by the need to wear insulated personal protective gear, such as rubber boots and overalls, which increases their core body temperatures (WSH, 2020).

Figure 3. Diagram showcasing how workers lose heat to the surroundings (WSH, 2020)

Also, they are unable to report heat stress symptoms due to systemic factors such as their lower socioeconomic level. For instance, they may be reluctant to visit a doctor or inform their supervisors about their symptoms of heat stress due to the cost of sick days, uncertainty regarding their health insurance or fear of losing their job (Yeoh et al., 2017). Due to the restrictions placed on them by their time-limited work visas which do not offer them much security and choice of employment, migrant workers are forced to work lengthy workdays with no negotiation (Yeoh et al., 2017).

Effects of heat stress on migrant workers

Heat stress results in a deterioration of the workers' mental and physical health and reduces their productivity. In a study below, workers reported a high incidence of heat stress in the summer and they have experienced significant health issues such as headache, dizziness, blurred vision and spasms.

	Summer month (N=109)		Winter month (N=110)	
	n	%	n	%
Neurological symptoms				
Headache	38	34.9	32	29.4
Loss of co-ordination	17	15.6	3	2.8
Dizziness	34	31.2	22	20.2
Tingling in hands/feet	21	19.3	25	22.9
Blurred vision	28	25.7	20	18.4
Fainting	20	18.4	16	14.7
Electrolyte imbalances				
Abdominal cramps	18	16.5	12	11.0
Spasms	28	25.7	27	24.8
Systemic symptoms				
Fatigue	49	45.0	41	37.6
Nausea	22	20.2	21	19.3
Loss of appetite	34	31.2	27	24.8
Early heat stress symptoms				
Heavy sweating	74	67.9	30	27.5
Intense thirst	79	72.5	44	40.8
Anxiety	13	11.9	8	7.3
Dark coloured urine output	37	33.9	18	16.5
Rashes	15	13.8	5	4.6
Itching skin	17	15.6	10	9.2
Dry mouth	50	45.9	12	11.0
Elevated temperature	24	22.0	6	5.5
Hot red or flushed dry skin	3	2.8	1	0.9
Occupational injuries				
Total reported occupational injuries	10	9.2	16	14.7
Falls/fractures	2	1.8	2	1.8
Cuts/scrapes/minor injuries	5	4.6	8	7.3
Non-descript injuries	3	2.8	0	0.0

Figure 4: Worker Reports of Heat Illness (Dutta et al., 2015)

Literature Review: What's Being Done to Reduce Heat Stress Amongst Migrant Workers?

In Singapore, there are existing legislations which protect migrant workers against heat stress, as detailed in the Workplace Safety and Health (WHSC) regulations. They are enforced by inspection of workplaces by the Ministry of Manpower (MOM). MOM encourages employers to conduct risk assessments, schedule work during the cooler parts of the day, and offer periodic breaks and shaded areas for workers to have adequate rest (WSH, 2020).

The WHSC has proposed a WBGT-based (Wet Bulb Globe Temperature) system to evaluate risk levels but its practical use is somewhat limited because the accuracy of WBGT meters ranges from +/- 0.5°C to +/- 2°C. In addition, some guidelines such as provision of temporary shelters and scheduled rest periods are ineffective as they do not offer sufficient protection from heat stress in a tropical climate like Singapore (Roxanne & Andrea, 2021). Other researchers have suggested that wearable technology may be more effective in reducing heat stress among migrant workers in Singapore (Al-Bouwarthan et al., 2019).

Heat Stress Level	WBGT
Low	<31°C
Moderate	31°C to 31.9°C
High	≥32°C

Figure 5. Temperature threshold for the different heat stress levels (WSH, 2020)

Figure 6. Worker using WBGT (WSH, 2020)

Saud (2016) introduced a hard-hat design that harnesses solar power to power an embedded fan to remove hot air and provide cool air for an additional $20 to its original cost. Jansen (2022) proposed the use of air-cooling vests, liquid-perfused cooling vests and evaporative cooling vests. However, these vests are expensive and bulky for migrant workers to wear (Roelofsen & Jansen, 2022).

Other ideas include the use of heat-stress monitoring sensors such as the Kenzen heat sensor which require workers to wear a thin metal sheet around their arm to monitor their core body temperature (Oliva, 2022). However, some researchers have found that the Kenzen heat sensor is inaccurate for workers wearing thick protective clothing (Moyen et al., 2021).

Needs Assessment

The most "precarious" form of labor in Singapore was found to be in construction sector, with fatalities in this sector "triple the overall fatality rate" (Hamid & Tutt, 2019). Branch and Hanley (2011) define precarious work as jobs that are "uncertain, unpredictable, and risky" from the perspective of the worker. Non-government organizations (NGO) and Healthserve have reported about the high number of unreported work injuries and "excessive work hours and cost-cutting measures" (Chok, 2014). This could be attributed to migrant workers' inability to voice out against heat stress due to the unbalanced power dynamics. As a result, they may have to continue work to meet deadlines despite not feeling well. Hence, there is a need to factor in the imbalance of power into the design of our POW hat to ensure that migrant workers are empowered to assert their rights.

Research Gap and Objective

From our literature review, we learnt that every individual may be affected by heat stress differently due to the difference in their body characteristics and tolerance (Notley et al., 2018) and that employers could choose to comply with WHSC guidelines by doing the bare minimum though it may be insufficient to protect the migrant workers adequately due to our rising temperature.

Our legislations regarding migrant workers do not mention the use of wearable technology. Therefore, we propose a two-pronged interdisciplinary solution that will incorporate wearable technology to reduce heat stress experienced by migrant workers and create greater awareness of the dangers of heat stress amongst migrant workers.

Proposed Solution

Our POW hard hat solution will focus on improving the existing hard-hat which is a standard accessory for migrant workers at construction sites. Our solution combines knowledge drawn from **electrical engineering** (sensor), **social sciences** (creating greater awareness of heat stress), **plant science** (plant adaptive function), **human physiology** (wearing the sensor in the ear) and **material sciences** (material chosen for the flap).

Firstly, we will add a flap to the existing hard-hat to provide additional protection against the sun. It will be anti-static and anti-microbial as the workers perspire a lot working under the hot sun. The flap will be made of a highly absorbent reusable material like super absorbent polymer (SAP) which will be soaked in ice-cold water before the start of work. As water absorbs heat from the neck area and evaporates from the flap when the worker works under the sun, his core-body temperature will be reduced. The flap is positioned over the worker's neck where the thermoregulation center of our body is located. This enables us to receive different signals regarding the thermal state of our body from thermoreceptors located in our body (Tyler & Sunderland, 2011).

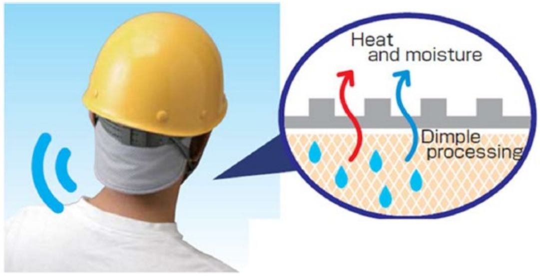


Figure 7. Picture of Flap (Roxanne & Andrea, 2021)

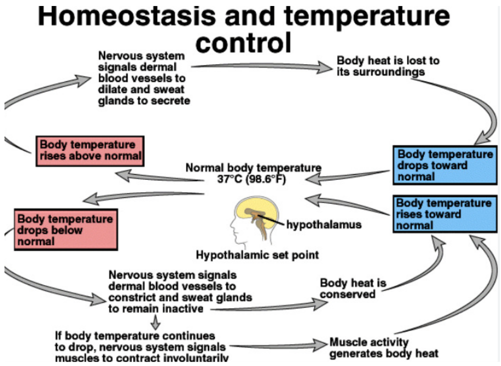


Figure 8: Diagram illustrating how the thermoregulation centre near our brain regulates temperature (Stevenson, 2012)

Secondly, we will incorporate a sensor to track the worker's heat stress level and the temperature of the surrounding. The worker's core body temperature and heart rate will be measured by a sensor that is worn in the ear as this will give the most accurate reading for Core Body Temperature (CBT) (Sharma et al., 2022). The sensor will connect to a red LED and vibrator on the hard-hat. If the worker is experiencing significant heat stress (with elevated heart rate and CBT of above 37 degrees), the hard-hat will start vibrating and the LED will blink. This allows both the worker and his supervisor to ascertain that the former is experiencing significant heat stress and the worker should seek immediate medical attention. Currently, the supervisor has absolute power to decide if the worker is experiencing heat stress.

For better efficiency, the sensor would also take into account the Predicted Mean Vote (combination of mean radiant temperature, wind speed, and humidity) values of the surroundings and trigger an alert even if the worker's internal heat stress is within manageable levels. Tracking PMV is an important enhancement as there may be a delay between experiencing extreme heat conditions and the onset of heat stroke (Sharma et al., 2022).

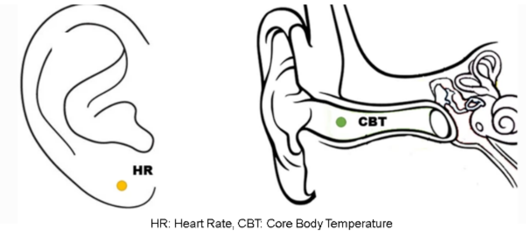


Figure 9: Illustration of measurement the sensor in the ear will be taking (Sharma et al., 2022)

Thirdly, we propose to add reflective strips, ventilation holes and a wider brim to the hard hat. Brimmed hats protect the head and face better than other designs. Also, the brim will be made of unbleached cotton which is cost-effective and it also contains natural lignins that protect the wearer against harmful ultraviolet rays.

Hat Type	Fore head	Cheeks	Nose	Ear	Chin	Neck
Brimmed	15+	2	7	6	>1	2
Bucket	15	2	6	7	>1	2
Baseball cap	9	>1	4	>1	>1	>1
Legionnaire's hat	13	3	10	4	>1	>4

Figure 10: Table describing the different protections offered by different hats Australian Radiation Protection and Nuclear Safety Agency (ARPANSA)

Additionally, reflective stripes are added to the hat to increase the visibility of the worker in low-light conditions and to deflect ultraviolet radiation.

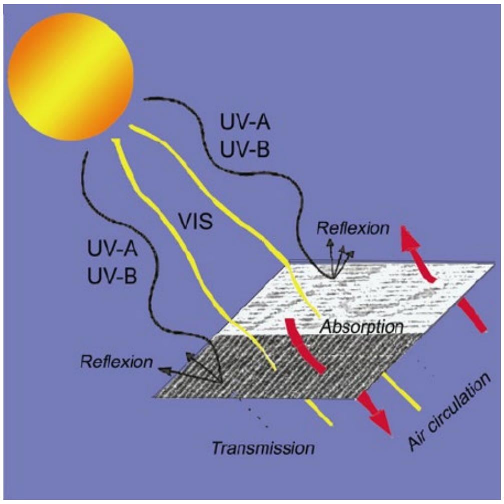


Figure 11: Light Conversion and Scattering In UV Protection Textiles (Grancaric, 2014)

This design is inspired by how plants transpire and lose heat through their pores. The neck contains our thermoregulatory center, and cooling it will help regulate the core body temperature of workers to reduce the risk of getting a heat stroke. In addition, we will add several holes to the hard hat for better ventilation.

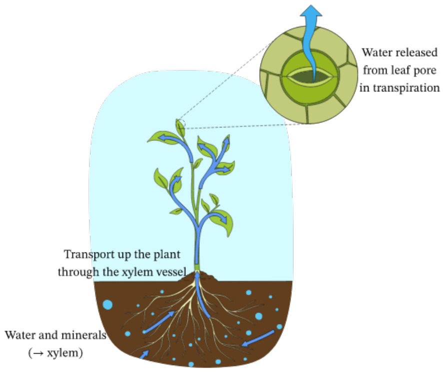


Figure 12: How plants transpire through their stomata (Nagwa, 2023)

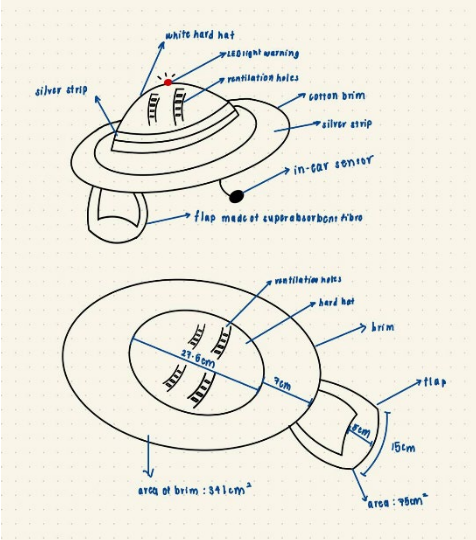


Figure 13. Model and Estimated Dimensions of our sunhat

Implementation

To be cost-effective, we would use the Infocomm Media Development Authority's Open Innovation Platform (OIP) to find a firm that could develop our prototype. Open calls for proposals will be carried out. For instance, we could work with STMicroelectronics as it has experience producing a wearable sensor - 'eHumidity and Temperature Sensor' - to check humidity and temperature in regard to human comfort (Insight Partners, 2022).

We will conduct a trial of the prototype to assess its effectiveness, take into account workers' feedback and alleviate any shortcomings that are identified. After this trial period, the product will be mass produced. To drive the adoption of POW hat, we will work with the Ministry of Manpower (MOM) and grassroots organizations to conduct workshops informing migrant workers about the effective use of the new hard hat and promote its use under WSCH regulations.

In the future, the cooling flap can also be applied and added to baseball hats and other types of hats to provide better protection against heat stress.

Budget (for test launch):

Product	Quantity	Total Price
Hard Hat (meets the safety requirements of SS 98/ EN397)	500	500 x $3.40 = $1700 (Horme, 2023)
Unbleached cotton	209.76 meters (81.28 cm width) 500 units: 341cm^2 x 500 = 170500cm^2	209.76 x $6.70 = $1405.45 (Fiber2Fashion)
Sensor STMicroelectronics STTS22H Digital Temperature Sensor 	500	$8,700.00 (STMicroelectronics)
Flap (SAP)	500	500 x $0.50 = $250 (Shanghai Tianjin Industry Co.)
TOTAL	500	$1700 + $1405.45 + $250 + $8,700= $12,055.45 $24/ POW hat

Conclusion

With global warming, migrant workers will face increasing danger of heat stress. For instance, Singapore had recently hit a record high temperature of 37 degrees (Begum, 2023).

Through our interdisciplinary approach, we have introduced new features to the POW hat and helped our migrant workers become more aware of their own heat stress levels, thus overcoming arbitrary decisions made by their supervisors. By incorporating knowledge from different disciplines, we believe our solution would go a long way in helping migrant workers to address the perennial problem of heat stress.

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Proposals

Time Poverty - Inequality's New Frontier

· **Group Name: Slaying Spiders** ·

Mathew Rithu Ann (SSS), Teo Chee Hao (MSE),
Yeh En Tong Leia (NBS), Luyun Sean Gabriel De La Cruz (SCSE)

Note : This team was the **first runner-up** in the competition

Background

Addressing the income inequality gap in Singapore has been a contentious topic among the socio-economic classes in our society for a long while [1]. While various economic policies such as increased investments in skills training and youth education by the government [2] have been made to provide assistance to these individuals and alleviate economic poverty, some experts argue that inequality does not just encompass economic factors, but also the amount of time we have outside of work. This is known as "Time Poverty", a phenomenon describing the shrinking amount of personal time people have [3]. The socio-economic impacts on an individual's life as a result of time poverty should not be understated, as research has shown that it adversely affects one's mental and physical health as well as one's productivity [4].

Literature Review

Advancements in technology that aimed to reduce human labor and time spent has ironically led to less time spent with family, friends and for rest [5]. This phenomenon is known as "Time Poverty," where the lack of time becomes the new frontier in combating global inequality. Time poverty refers to the lack of adequate leisure time after working [6]. While global financial conditions have been improving, time affluence has not been experienced by many. Both the rich and poor alike face this pertinent issue of having insufficient time, even if the latter may be more susceptible to "Time Poverty" due to their lower economic status. Thus, the aim of this paper is to understand the causes and effects of time poverty, as well as its disproportionate impact on the poor.

Societal prioritization of work over leisure time is one of the main causes of time poverty, and this compromises quality time spent with family members, weakening social bonds and leading to increased familial complications. Quality time can create more positive memories, which has been proven to strengthen family bonds and increase one's sense of belongingness [7], while quality family time improves physical, behavioral and mental performances for both parents and children [8]. For parents, strengthened family bonds allow for better mental states [9], and having better well-being can allow them to serve as better role models for their children. Similar improvements were also viewed in children, with higher overall well-being reported among youths with increased family connectedness [10]. For children, familial bonds strengthened school performance, reduced behavioral risks of drug abuse and crime [11], and reduced frequency and severity of mental disorders [12]. On the other hand, the negative impact of time poverty on family time exacerbates these issues, causing decreased rates of school attendance, [13] poorer academic performance and premature workforce enrolment [14]. These impacts further trap family members in a socio-economic poverty cycle. Indeed, time poverty may also lower physical health by promoting unhealthy eating habits and reduced exercise [15]. In all, time poverty not only limits access to opportunities of positive development, but further causes adverse impacts on one's overall health.

The brunt of time poverty is even more pronounced when it comes to the poor. Combined with their disadvantageous social conditions, the financially poor are mainly victimized by time poverty. Having less autonomy over working hours, decreased earning and requiring increased effort to reach a livable wage, the poor are limited in their daily time control. When this is experienced by parents, especially in working class families, it renders the children most vulnerable to its consequences. Having to choose between economic stability and child development, these parents often choose the former with the expectation of reaching the latter goal eventually [16]. Parents of a low economic status are left with limited options to ensure optimal success. This thus requires an accessible, specific and effective solution to combat this problem.

This literature review hence underlines the importance of addressing time poverty today. By understanding causes and effects, time poverty is a pertinent issue that can only be addressed by effectively enhancing familial bonding through an integrative solution.

Research Gap

In order to overcome the challenges faced by low-income families due to time poverty, it is essential to encourage increased family time via an accessible program. This program should put a lesser strain on the user's chronological and economical resources while improving the children's development, subsequently equipping them with the tools to escape the poverty cycle.

Current research has introduced the idea of technological integration to increase accessible means for greater connection and stronger bonds to develop. However, research proving that shared online experiences do compensate for physical family quality time is limited. It is important to utilize the internet - a convenient accessible mode that receives mass adoption and is effective in achieving quality time while reducing the need for chronological and economical resources. Furthermore, research is limited in generalizability as it does not take into account the local context of low-income families in Singapore.

Additionally, social media platforms have conflicts of interests. Services exchanged often aim to obtain data and increase interactions, rather than to improve interaction quality. This produces algorithms that create unnecessary hateful interactions that hardly strengthen relationships. Most importantly, social media does not engage mechanisms to convert time spent online to real world experiences, which is key in further validating familial bonds. In other words, social media platforms may lack the means for people to communicate with their different love languages or express affectionate displays, actions which are predominantly only seen in families. Hence, while existing platforms may offer convenient channels of communication, their impacts are perfunctory at best when it comes to building strong familial bonds.

Research Objective

Our research objective is to find out whether familial bonds among low-income families can be strengthened through technology despite the issue of time poverty. This will involve the implementation of an easy-to-use **virtual platform** specifically catered for families, and sufficient incentive mechanisms to ensure user retention. We aim to understand the effect of these deepened familial bonds on the overall improvements of children from lower income households.

Proposed Interdisciplinary Solution

CoreMmrs
Creating priceless moments

Our proposed interdisciplinary solution is an outreach social program that has two stages of adoption. Firstly, awareness campaigns about time poverty are integral in highlighting the importance of familial bonding time despite rising time poverty. Secondly, a mobile application, CoreMmrs, will be implemented to provide pockets of time and interaction, thus shifting quality time to a virtual realm.

Our outreach programs will be utilizing digital media - social media ads and influencer campaigns to increase societal awareness of time poverty before the application is introduced. CoreMmrs will involve a **shared space** where families can share their daily lives with one another. The user interface will resemble a corkboard, where family members can add their own notes (text, images, videos), and it will be kept simple in order to be user friendly to all ages. Additionally, CoreMmrs Wrapped is an application feature providing monthly personal recaps on the families' application usage. This will offer a nostalgic and insightful reflection on their daily activities. By analyzing activity data, CoreMmrs Wrapped creates a visually appealing overview that beautifies daily mundane activities.

Frequent application usage makes users eligible to earn points through our reward feature CoreMmrs Milestones. These points can be used to redeem various vouchers for leisure or dining, which can encourage family bonding. Furthermore, long-term users will be entitled to receive a physical customized scrapbook including the photos pinned on their year-end CoreMmrs board. Hence, CoreMmrs elevates user engagement and connection by creating a newfound depth to sharing daily moments.

After the initial launch, we aim to further improve the application by using business analytics and surveys. Continuous analytics will be required to best determine the types of vouchers to distribute, subsequently optimizing the costs. Surveys based on user satisfaction and perceived improvements within the family will also be distributed occasionally to understand the effectiveness of our proposal.

CoreMmrs will ultimately require assistance from the Singapore government to provide valuable data on families and vouchers for family use. The integration of Singpass will verify the family circle that our users belong to and allow them to redeem the various vouchers that they have earned. To ensure continued widespread outreach and adoption, we will partner with non-profit organizations, non-governmental organizations and The People's Association to ensure that the outreach can reach a critical mass.

Implementation Procedures

To implement the proposed solution, the following steps will be taken:

Initial outreach programme using social media influencers/ news articles highlighting the severity of time poverty and why people should be allocating more time to forming familial bonds.

↓

Collaborate with LifeSG to push out CoreMmrs as a service to encourage familial ties. LifeSG to provide Singpass implementation as well as the vouchers to be distributed.

↓

Work with People's Association for mini launch events among various community centres.

↓

Use continuous business analytics/user feedback data to measure effectiveness and ensure that our costs are optimised and justified.

Figure 1. Implementation Procedures

Figure 2. Sample advertisement for awareness campaign

Figure 3. CoreMmrs home page concept

Proposed Budget

Table 1. Proposed annual budget

Category	Total Budget (per year)
Influencer Marketing	120k
App PR outreach	200 per hr 1600 per day ~2m
Trip vouchers	34m Based on: 25% adoption rate of 1.37 million households $100 SGD per year in vouchers
Physical scrapbook	68k top 10% of expected households $20 per scrapbook.
App development	200k
Total	36.38 mil

Conclusion

Our campaign's end goal is to emphasize how time poverty impacts familial relations and children's upbringings, and this is done through the incorporation of an interdisciplinary solution encompassing insights from communication studies, psychology, sociology, business and IT. Given how time poverty is relatively unknown to most Singaporeans, our campaign faces the challenge of public education while providing a solution that has not been extensively researched: shifting familial quality time to virtual spaces.

Nonetheless, similar campaigns have been previously undertaken by the Singaporean government, including the Healthy 365 campaign aimed to improve eating habits with gamification and monetary incentives, coupled with community outreach programs. These campaigns will serve as benchmarks for our campaign's present and future success.

The collected data from this program will truly allow us to understand how a collective sense of ownership and virtual family time can improve familial ties. This aims to improve the upbringing of the next generation of Singaporeans to move up the socio-economic ladder based on educational performance. Although the problem-solution match may not be entirely reliable or accurate in this first run, the data collected remains helpful in crafting our next campaign and/or product with greater effectiveness.

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Proposals

Tackling Childhood Trauma: Confronting Childhood Neglect Trauma Through Technology-Driven Exposure Therapy

· **Group Name: Team Dugongs** ·

Ng Yoon Yik (SCSE), Ethan Tan Weijie (SSS), Ow Le Yi, Nikki (WKW SCI), Teo Wei Xuan (SOH)

Note : This team was the **second runner-up** in the competition

Background information

Traumatic experiences can have significant long-term impacts on an individual's mental health and well-being (Black & Flynn, 2020). Many people are able to integrate these experiences into their conscious memories and carry on with their day-to-day functioning. However, those who are unable to do so are easily overwhelmed by the immense emotional arousal when such memories are triggered out of the unconscious memory into the conscious mind (Black & Flynn, 2020). Some kinds of trauma are significantly more complex to resolve, such as childhood trauma caused by parental neglect, due to these experiences negatively disrupting the development of the brain in its developing stages (Child Welfare Information Gateway, 2019). Parental neglect inflicts emotional distress such as segregation, anxiety, and mistrust. In the long run, these may culminate in long-term behavioral, psychological, and physical health repercussions such as the development of antisocial traits and even substance-use disorders (Child Welfare Information Gateway, 2019).

Literature review

Exposure therapy is a common treatment for patients with trauma. It exposes a patient to distressing stimuli, in the context of their traumatic experiences, incrementally. Exposure therapy aims to increase tolerance and decrease anxiety. However, treating childhood neglect with exposure therapy poses challenges in recreating childhood events in a therapeutic setting, which can trigger patients and is difficult for therapists to simulate effectively.

Virtual reality exposure therapy (VRET) addresses the challenges of exposure therapy by adapting three-dimensional virtual environments (VEs) into its treatments. VEs are able to evoke emotions such as sadness and anxiety in users (Felnhofer et al., 2015). VRET has also reported a success rate of between 66% and 90% for patients suffering from post-traumatic stress disorder (PTSD), a severe form of trauma (Goudman et al., 2022).

Haptics, particularly those of positive affectivity, is a vital part of parent-child bond. Childhood trauma can disrupt the normal development of the sensory system, leading to difficulties with sensory integration. Touch-based interventions, such as sensory integration therapy, have shown promise in helping children with trauma-related sensory issues by promoting self-regulation and improving sensory processing (Kashefimehr et al., 2018).

Some therapeutic approaches explicitly incorporate touch as part of the treatment for childhood trauma. For example, trauma-focused touch therapies like somatic experiencing and sensorimotor psychotherapy integrate touch as a somatic intervention to facilitate the release and processing of trauma-related sensations and emotions (Levine, 2010; Ogden et al., 2006). However, virtual reality (VR) headsets used during VRET are only able to stimulate vision and hearing, but not touch.

Research Gap

Existing research on the assessment of VR treatments on anxiety disorders has been conducted with social anxiety disorder (SAD), obsessive-compulsive disorder (OCD), and PTSD (Meyerbröker & Morina, 2021).

SAD: VR has been used to simulate social situations and environments that trigger anxiety in individuals with SAD. Research has shown that VRET can effectively assess and treat social anxiety by gradually exposing individuals to anxiety-provoking situations, allowing them to practice coping strategies and develop new skills (Anderson et al., 2005; Pertaub et al., 2002).

OCD: VR has been employed to simulate scenarios that trigger obsessive thoughts and compulsive behaviors in individuals with OCD. Virtual environments provide a controlled setting for exposure and response prevention, allowing individuals to confront their obsessions and resist engaging in compulsions. VR-based assessments have been used to evaluate the severity of symptoms and assess treatment outcomes in OCD (Miloff et al., 2016; Rothbaum et al., 2006).

PTSD: VR has been utilized to recreate and assess traumatic events in a safe and controlled environment. Virtual environments can simulate specific triggers or situations related to the traumatic experience, helping individuals to confront and process their traumatic memories. VR-based exposure therapy has shown promise in the assessment and treatment of PTSD by reducing avoidance behaviors and promoting emotional processing (Rothbaum et al., 1996; Rizzo et al., 2015).

Research on augmented reality (AR) in psychotherapy, on the other hand, is scarce outside of addressing phobias and PTSD. Additionally, to the best of our knowledge, there is a lack of research explicitly examining the use of such technology to address childhood trauma, particularly those caused by parental neglect. Although exposure therapy has been proven effective for the treatment of other types of trauma, the complexity of childhood trauma caused by neglect presents challenges for existing exposure therapy methods. Technology-based solutions such as VR and AR offer potential solutions to this problem, but their effectiveness in treating childhood neglect has not been adequately explored.

Research Objective

The objective of this proposal is to implement an immersive technological psychotherapy solution for patients with childhood neglect. The solution will use AI to assist memory reconstruction and deliver this through VR and AR systems.

Proposed Interdisciplinary Solution

Our solution is an interdisciplinary psychotherapy service that involves using AR and VR experiences, a tactile feedback bodysuit, and AI-powered voice reconstruction to recreate the experience of childhood neglect in a therapeutic setting. The AR and VR experiences will simulate environments and situations related to childhood neglect, such as a neglectful home or a lack of attention from a parent. The tactile feedback bodysuit will provide a sense of touch and allow patients to interact with the virtual environment. The AI-powered voice reconstruction will allow patients to hear a voice that mimics the tone and language of their neglectful parent. In essence, patients can directly confront traumatic experiences through technology-driven exposure therapy.

The interdisciplinary approach combines the expertise of therapists, technology experts, and animators to create a safe and effective therapeutic environment. Psychotherapists will set appropriate guardrails during reconstructed memory projection and lead the entire treatment process, providing guidance and support throughout. Technology engineers and designers will develop the AR and VR experiences, tactile feedback bodysuit, and AI-powered voice and memory reconstruction with close directives from the psychotherapists. The intensity of the immersion of memory reconstruction will then be enhanced by the animators before a final assessment by the psychotherapists.

Benefit(s) of the solution

The proposed interdisciplinary solution has several potential benefits:

- It provides a **safe and controlled** environment for patients to re-experience childhood neglect, which can facilitate healing and recovery.
- It allows for a **more realistic** simulation of childhood neglect, which can be difficult to recreate in a traditional therapy setting.

It can be **tailored to the specific** needs of each patient, allowing for a more personalized treatment approach. Finally, it is a bridge between in vivo exposure therapy and imaginal exposure therapy, as it comprises multiple senses without the risk of in-person confrontation.

Proposed Implementation Procedure

I. Development Implementation

1. Assemble a team of software and hardware engineers, cognitive behavioral psychotherapists and animators to develop AR and VR experiences, the tactile feedback bodysuit, AI-powered voice reconstruction, and AI-generated memory reconstruction.
2. Recruit therapists specializing in treating childhood neglect and provide training on how to execute the technology-based exposure therapy.
3. Pilot the therapy by conducting a test of the therapy with a small group of patients. The goal is to determine the treatment's effectiveness and make any necessary adjustments.

4. Evaluate the effectiveness of therapy sessions through MRI brain scans and neuropsychotherapy.

    a. *Pre- and post-treatment comparisons:* By conducting MRI brain scans before and after psychotherapy, researchers can compare the structural and functional changes in the brain that occur as a result of the treatment. These comparisons can provide insights into the neural mechanisms underlying the effectiveness of psychotherapy (Linden, 2006).

    b. *Identifying brain markers:* MRI scans can help identify specific brain markers or patterns associated with certain mental health conditions or therapeutic outcomes. For example, researchers have found that certain brain regions, such as the prefrontal cortex and amygdala, exhibit changes in activity or connectivity following psychotherapy for conditions like depression or anxiety (DeRubeis et al., 2008; Furmark et al., 2002).

    c. *Predictive value:* MRI scans may also have predictive value in determining the potential success of psychotherapy for an individual. By examining certain brain characteristics or patterns prior to treatment, researchers can potentially identify patients who are more likely to respond positively to specific therapeutic interventions (Straube et al., 2006).

    d. *Treatment optimisation:* MRI scans can aid in optimizing treatment protocols by providing feedback on the neural effects of different therapeutic approaches. Comparing brain changes in response to various treatment modalities can help identify which interventions are most effective in modulating specific brain regions or networks (Leuchter et al., 2009).

    e. *Understanding mechanisms of change:* MRI scans can shed light on the underlying mechanisms through which psychotherapy leads to positive outcomes. By examining changes in brain structure, connectivity, or neurotransmitter systems, researchers can gain insights into how psychotherapy impacts the brain and contributes to symptom reduction or behavioral changes (Phillips et al., 2003).

II. Operationalization

1. Conduct a needs assessment to determine the specific needs of patients who have experienced childhood neglect. The goal is to identify the most effective way to use technology-based exposure therapy to address these needs.

2. Implement technology-based exposure therapy to patients with trauma progressively.

3. After a patient has recovered from a trauma experience, the patient can go back to verbal psychotherapy.

Data collected can be used to further optimise AR and VR experiences, the tactile feedback bodysuit, and AI-powered voice and memory reconstruction.

Budget for Implementation of Solution

Item	Description	Costs
Technological development cost and equipment (sunk cost)	AR development	$300,000
	VR development	$150,000
	Tactile bodysuit	$500,000
	Voice reconstruction AI	$10,000
	Headset	$3,000
Personnel cost (yearly cost)	Psychotherapists	$150,000
	Software engineers	$120,000
	Hardware engineers	$120,000
	Administrative staff	$40,000
	Animators	$100,000
Facilities and other costs (yearly cost)	Clinic rental	$60,000
	Office supplies / miscellaneous	$10,000
Contingency funds	~10% of total budget	$150,000
Total		$1,713,000

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Proposals

Bridging the Gap: Leveraging Emerging Technologies and Community Partnerships to Foster Academic Success in Low-income Families

· **Group Name: JZJ** ·

Jonathan Lim Jun Wei (SCSE), Cheung Zhi Heng (SCSE), Seah Wei Tat, Justin (EEE)

Note : This team was the **third runner-up** in the competition

Background

Academic achievement is a crucial factor in determining future opportunities and success, yet many low-income families face significant barriers to accessing the resources and support they need to succeed in school [1]. As inflation continues to rise, low-income families face not only the difficulty of coping with increased living expenses but also the added challenge of affording the necessary provisions to improve their children's educational outcomes in the future.

Literature Review

Existing approaches like personalized learning and community-based learning environments have shown promise in narrowing the achievement gap. During a REL Central Webinar, presenters suggested that when students personalized their learning by tracking their own progress using data notebooks, it empowers them to become active participants in their education [2]. By promoting self-awareness, goal setting, motivation, and targeted support, it plays a significant role in narrowing the achievement gap and fostering academic success for all students. However, there are still signs of inefficiency. Students tracking progress using data notebooks can be time-consuming and resource intensive. The process of collecting, analyzing, and interpreting the data manually may pose challenges in terms of accuracy and scalability.

Hence, there are recent studies of using personalized brain-machine interfaces to further cope with these challenges. According to the Journal of Medical Internet Research, one of the most fascinating interdisciplinary fields of science and technology today is the study of and applications of brain-computer and brain-machine interfaces. Invasive brain-machine connections will also enable direct mental contact between people [3].

Monitoring, controlling, and training human psychophysiological states and cognitive capacities is one of the most promising uses of non-invasive brain-computer interfaces. The passive brain-computer interface used in these investigations continuously assesses the subject's mental state. Without any intention of controlling command generation, the passive brain-computer interface analyses the user's present brain activity and offers details about aspects of that activity relating to attention, emotional mood, weariness, etc. [3]. This shows that there is potential in developing brain-machine interfaces for technology-supported personalized applications in general.

However, bridging the achievement gap requires an interdisciplinary approach. According to a finding in The Urban Review, students are more likely to perform at higher levels on state-mandated achievement exams when schools in low-income, urban neighborhoods build programs of partnerships and seek to reach out to all families and the community. Hence, it is crucial to set up partnership programs with school, family and the community as this connection could support families to help improve student achievement [4]. There exists a potential in leveraging emerging technologies with community partnership to enhance academic success in low-income families.

Research Gap

Existing research has made progress in exploring personalized learning and community-based approaches for addressing the achievement gap in low-income families. However, there is a research gap in integrating emerging technologies like brain-machine interfaces into these approaches. Limited studies have examined the feasibility and effectiveness of using brain-machine interfaces for personalized learning and performance assessment. Further exploration is needed to leverage neural data from these interfaces for real-time feedback and tailored learning experiences. Research is also required to understand the integration of community partnerships in enhancing accessibility and effectiveness of personalized learning with adaptive technologies. Closing this gap will provide valuable insights into interdisciplinary solutions that combine emerging technologies, community partnerships, and personalized learning to support academic success in low-income families.

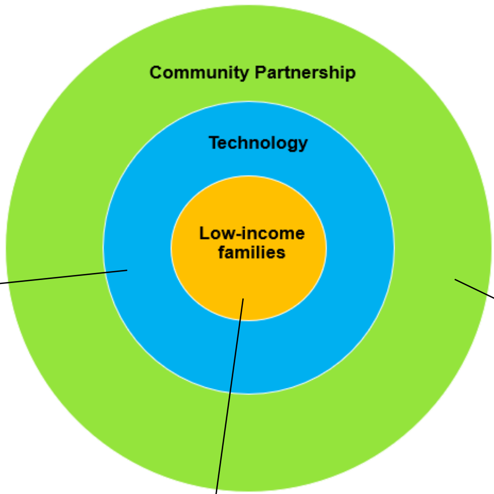
Research Objective

The objective of this research is to develop a futuristic interdisciplinary approach to close the achievement gap for academic success between low-income families and high-income families. This approach will combine community-based learning environments with personalised learning using adaptive technologies to provide students with access to high-quality educational resources and support. The goal is to improve academic performance and accessibility for low-income families by addressing not only the academic needs but also the social, physical, and emotional needs of students. The research will explore the feasibility and effectiveness of this approach, and its potential impact on student outcomes, as well as assess the challenges and opportunities associated with its implementation.

Proposed Interdisciplinary Solution

The achievement gap between low-income and high-income families is a persistent problem in education. To address this issue, we propose an innovative and integrated approach that involves interdisciplinary collaboration between community partners, educators and technology experts to collaborate on developing and implementing the solution. By leveraging the expertise of different disciplines, we can develop a more holistic and effective approach that addresses the root causes of the achievement gap.

Figure 1 illustrates the interactions between community partnership, technology, and low-income families in our proposed interdisciplinary approach. The visual representation shows how the relationships and dynamics involved are integrated to provide an interdisciplinary solution. Beginning at the innermost circle, children from low-income families will be supported with personalized technology such as brain-machine interfaced earbuds, Success-For-All (SFA) applications and AI models such as the JZJ chatbot to enhance their learning. This access and use of personalized technology will be partnered with educators and community organizations.



Brain-machine interface devices

- Earbuds connected to the brain-machine interface
- Data collection and analysis algorithms
- SFA (Success for All) Application
- AI models for personalised learning
- Virtual reality environments for immersive learning

Students from low-income families

- Access to brain-machine interface technology
- Engagement in question-solving activities using their thoughts
- SFA app for tracking and monitoring social, emotional, and academic development
- Personalised learning experiences based on individual needs
- Support and interventions from community organizations

Educators and teachers

- Training programs for educators on using the SFA app
- Collaboration between educators and technology experts
- Designing AI models and virtual reality environments
- Developing educational materials aligned with the curriculum
- Assessing student performance and identifying areas of improvement
- Provide resources (e.g. laptop, wifi)

Figure 1. An integrated approach to the proposed solution

In Figure 1, low-income students will be equipped with earbuds connected to a brain-machine interface for thought-based question-solving. Data from the interface will be sent to the SFA app, categorizing scores in social, emotional, and academic areas (see Figure 2). The JZJ chatbot will initiate interactions with interdisciplinary partners like community organizations, sharing scores and developing strategies for improvement.

The outermost circle consists of community partnerships where educators will access student performance scores through the SFA app (see Figure 1). They will use the data to create personalized educational materials, analyze scores, identify areas for improvement, and develop targeted learning materials and interventions. The unique features of the SFA app will be its ability to allow educators to design AI models and virtual reality environments aligned with the curriculum and specific learning objectives. These interactive tools, such as intelligent tutoring systems, and virtual laboratories, will enhance engagement and learning outcomes. By providing educators with these resources, the app will bridge the gap for low-income families by addressing their academic needs and improving learning outcomes.

Furthermore, our SFA app will incorporate an intriguing feature within the technology section of the concentric circle. By utilizing the connected earbuds and engaging in specific cognitive tasks, the app will analyze neural activity and transforms it into visual representations that align with the students' mental imagery (see Figure 2). This cutting-edge application of brain-machine interface technology will offer a novel means for individuals to externalize and share their imagined experiences, such as embarking on an exchange trip to France, by harnessing the power of their thoughts. By enabling students to visualize their thoughts and experiences, the app will stimulate imagination and engender a sense of engagement. It will empower students from low-income families to explore and envision experiences they may not have had the opportunity to encounter in reality, like going on an exchange trip to France. This will foster creative thinking and broaden their horizons.

The SFA app will combine cutting-edge technology and human expertise to offer a unique interdisciplinary solution. By integrating educators' expertise and the creativity of AI models and virtual reality environments, it will provide a novel and integrated approach to address learning objectives, enhance student engagement, and promote academic success.

Figure 2 below shows a visual representation of the flow and interactions within our IT solution. The diagram illustrates the connections between the earbuds, brain-machine interface, SFA App, and chatbot system, showcasing how these components work together to enhance the academic development and support the social and emotional well-being of low-income families

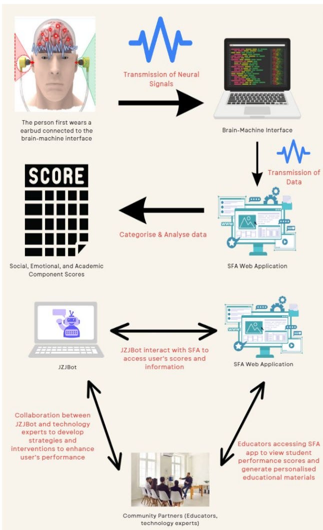


Figure 2. Flow of IT Solution

Benefits

The utilization of earbuds connected to a brain-machine interface, coupled with the SFA app and community partnerships, will offer substantial benefits for low-income families. This innovative approach will empower students to engage in question-solving activities using their thoughts, providing a unique and immersive learning experience. The data collected through the brain-machine interface and analysis by the SFA app will allow for personalized assessment and feedback across social, emotional, and academic development areas. This personalized feedback will enable targeted interventions and learning strategies, enhancing students' performance, and addressing individual needs. Moreover, the involvement of community partnerships will ensure a comprehensive support system, enabling students to receive guidance and resources beyond the classroom. By bridging the technological divide and fostering interdisciplinary collaboration, this approach will significantly contribute to narrowing the achievement gap and empowering low-income families with access to cutting-edge educational opportunities.

Implementation Procedures

To implement the solution, the following steps will be taken:

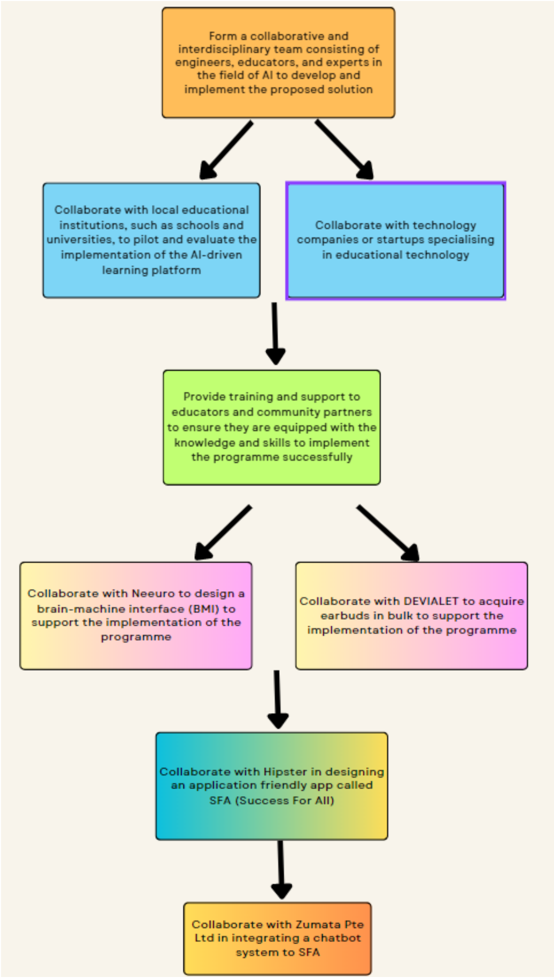


Figure 3. Implementation procedures

Proposed Budget

Item	Description	Costs
Personnel Costs	Project Manager: • (1 full-time position at $60,000/year)	$60,000
	Developers/Programmers: • (3 full-time software engineers at $50,000/year each)	$150,000
	Educators/Educational Specialists: • (2 part-time educators or subject matter experts at $30,000/year each)	$60,000
	Technical Support Staff: • (2 full-time technical support personnel at $40,000/year each)	$80,000
Equipment and Material Costs:	Earbuds with Brain-Machine Interface	$20,000
	Software Development and Licensing	$50,000
	Server Infrastructure	$20,000
	Educational Materials	$10,000
	Quality Assurance and Testing	$15,000
Contingency Funds:	15% of total budget	$20,000

Conclusion

The use of technology, coupled with the collaboration of community partners, offers a promising solution to bridge the educational gap for low-income families. By integrating earbuds connected to brain-machine interfaces and fostering partnerships with educators, we can create personalized and adaptive learning experiences tailored to the unique needs of students. The SFA app will empower educators to access student performance data, identify areas for improvement, and generate targeted educational materials. This interdisciplinary approach emphasizes the importance of technology and community engagement in addressing the challenges faced by low-income families. We call upon policymakers, educational institutions, and community stakeholders to support and actively participate in this initiative. Together, we can drive positive change, provide equitable educational opportunities, and pave the way for academic success among low-income students.

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