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When Geopolitics Meet Design: -162°C Trading Power – A Case Study

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Abstract
This paper chronicles and reflects upon a collaborative project between Virginia Commonwealth University in Qatar (VCUarts Qatar) and the Advanced Institute of Industrial Technology in Tokyo (AIIT). Titled -162°C Trading Power, this project started as an exploration into the relationships between the two countries of Qatar and Japan, and it resulted in the design, production and exhibition of a kinetic installation at the Wieden+Kennedy gallery in Tokyo, as well as an artbook printed in a limited number of copies. Starting from the analysis of the new taxis of Tokyo, the history and the dynamics of the relationship between Japan and Qatar based on the trade of Liquid Natural Gas are unveiled through this project. The authors of this paper advocate for an approach that makes use of existing designed artefacts as an access point to discover and visualize information about the geopolitics between countries. While reporting about the process and outcomes of the project, the authors reflect on the value and the need for creative projects that highlight the apparently invisible political, economic and cultural links that regulate the world we live in. Conclusively, the approach adopted in this project is put in relation with the one of the emerging GEO–DESIGN platform recently created at the Design Academy of Eindhoven as a master course, highlighting the similarities and the potential that GEO–DESIGN has in expanding and blending the territory of design practice and research.

Keywords: Geopolitics, GEO–DESIGN, Kinetic Installation, Qatar, Japan, LNG
Introduction

This project is about the politico-economical relationship between Qatar and Japan. However, before focusing on the relationship between Qatar and Japan – and the project -162°C Trading Power – it can be helpful to briefly reflect on how, since humanity has developed long distance trading, the goods that societies design, produce and consume are tangible testimonies of the complex relations between faraway countries (Sudjic, 2009).

As two of the authors of this project are from Torino, Italy, it just seems appropriate to use a local product as an example of a tangible manifestation of the geopolitics that affected the economy and culture of that particular region centuries ago. Culinarily speaking, Torino is most known for its typical chocolate, called Gianduja (Mohos, 2010). If you have a sweet tooth, you are certainly familiar with the flavor of Gianduja thanks to its most commercial derivative, Nutella (Padovani, 2014). Gianduja is the result of a particular mix of cocoa and hazelnuts, among other ingredients. Now you might be wondering what Gianduja has to do with global geopolitics? Well, sometimes a piece of chocolate can teach us a lot about the complexity of the world we live in. When Gianduja was invented, it was the middle of the 19th century. At that time, France and the United Kingdom were battling each other on every front, militarily, culturally and economically. Napoleon Bonaparte, Emperor of France, was then in control of most continental Europe, while the United Kingdom could count on a great global expansion, including the Caribbean territories. In order to boycott the British economy, Napoleon ordered a commercial blockade – known as The Continental System, preventing the British from selling their goods in Europe (Cardoso, 2013) (Figure 1).

![Figure 1: A map of The Continental System, highlighting territories barred from importing goods from the British Empire.](image)

One of the commodities that was mostly affected by this conflict was cocoa, which then became scarcely available and extremely expensive to European countries. The genius of Piedmonts’ chocolatiers led them to find alternative solutions to limit the use of cocoa in their recipes, including mixing cocoa powder with pulverized hazelnuts, a local product available in abundance in the Piedmont region, where Torino is located. This operation not only allowed a considerable lowering of the costs, but it also gave birth to a new type of chocolate, Gianduja indeed, which then was shaped in its typical trapezoidal form and individually wrapped in golden aluminum paper, each becoming known as Gianduiotto (Figure 2).
This is an example of how invisible macro-systems often manifest into small, seemingly mundane things. In reality, those small things are what shape our lifestyles and cultures. As designers and design researchers, we are naturally inclined towards analyzing and trying to understand the artefacts around us.

**Background**

This collaborative project between faculty at VCUarts (Qatar) and AIIT (Japan) became a possibility in 2018, a time when Tokyo was then preparing for the 2020 Olympics. The Olympics were later delayed because of the Covid emergency. Among the many changes that the city was undertaking in preparation to welcome the many anticipated tourists, a new city taxi was presented. This taxi, produced by Toyota and also known as the JPN Taxi, with its silhouette vaguely reminding of the one of a London taxi, had the characteristic of being powered by Liquid Natural Gas, as shown in Figure 3 (LNG) (Kikuchi, 1980). Just like the Gianduiotto in our introductory story, the new Tokyo taxi became for us the access point to a much larger story.
As we know, in March 11th 2011, Japan suffered a major earthquake and consequent tsunami, which severely damaged the coasts of Fukushima and Iwate prefectures. Damages were immense. Most notably, the Daiichi Nuclear Power Plant in Ōkuma in the Fukushima Prefecture was heavily impacted, thus forcing the authorities to shut it down (Povinec et al., 2013). As a precaution, most of the other nuclear plants in Japan were also closed, and currently only few of those have started operating again (Hayashi & Hughes, 2013). As a result, Japan found itself in the position of having to import energy in order to meet its industrial, commercial and residential needs. In the same period, Qatar completed its expansion of infrastructure for the production of LNG, nearly doubling its production from 2009, as shown in the graph in Figure 4 (Miyamoto et al., 2012). Japan’s demand for energy, and Qatar’s supply set the basis for the 10-year agreement struck by the two countries in 2011, marking the shift from nuclear to natural gas as fuel for electricity generation in Japan, as shown in the graph in Figure 5 (Meza & Koç, 2021).

At -162°C natural gas becomes liquid, reducing in volume by a factor of over 600, the key innovation that makes it an economically viable commodity to trade (Zhao et al., 2020). LNG is Qatar’s main export, with Japan being its largest buyer and a primary source of revenue for this small, yet influential gulf nation. LNG might be odorless, colorless and almost weightless, but in fact, it is very tangible in its uses and outcomes. Once fed into the Japanese pipe system, LNG reaches Japanese citizens’ homes allowing them to cook and heat their houses. It also becomes the propellant for public and commercial transportation, including the above-mentioned Tokyo taxis. Furthermore, it is used in the pulp and paper, metals,
chemicals, petroleum refining, stone, clay and glass, plastic, and food processing industries. Similarly, the money that Japan feeds into the cash flow of Qatar is what powers the local economy, its lifestyle, the hectic growth of its capital city, Doha. Although primarily economic, this exchange impacts the culture, lifestyle, and geopolitics of both countries. The project that we were about to begin was concerned with the whole story, including the beginning of the relationships between Qatar and Japan and their impact on both economies and cultures (Al Subaey, 2017; Andressen, 2016; Eggeling, 2017).

While the project was yet to be defined, its topic and direction was certainly identified. Therefore, the team members were able to propose it to a number of galleries in Tokyo, including a gallery space in the area of Nakameguro directed and managed by the international communication agency Wieden+Kennedy. Wieden+Kennedy seemed like a perfect match to host this project, considering the role that this agency had in developing cultural intermediary strategies when commissioned to localize the identity of global brands like Nike (Kobayashi et al., 2018; Koji Kobayashi, 2012). That might have been one of the reasons why, after submitting a proposal featuring the contents of the project, Wieden+Kennedy granted the use of their gallery space for one week in the month of December 2018.

-162ºC Trading Power – The Project

When we began our conversations about this project, it became clear that we wanted it to be primarily visual research exploring all aspects of the unique relationship between Japan and Qatar based on the import-export of LNG, which has been a catalyst for growth in both countries. In this project, LNG can be considered as an *Hyperobject*, as described by philosopher Timothy Morton (2013). *Hyperobjects* are physical or non-physical entities that imply complex temporal and/or geographical systems, obliging researchers to look at them in a holistic way. That means embracing all their scientific, social, political, economic complexity. This very inclusive approach is what we chose to adopt in this exploration and to be rendered for the visitors, so to visualize chains of cause and consequences that normally go unseen. While there is linearity in the events that led to the ties between Qatar and Japan, we understood that, because of the complexity and breadth of the matters, relying on linear story-telling would have not been the best way to convey the meanings with which our project was concerned (Bosser et al., 2010). Our project was not aiming at being purely informative, after all. Certainly, the project aimed at raising awareness of the complexity and impact of geopolitics. In doing so, it was oriented towards the exploration of a hypothetical identity that could encompass both sides of the story, the one from Qatar and the one from Japan.

Scraping the web

Because of the breadth of the context of our exploration, its complexity and the variety of information that we started engaging with, we decided to start by collecting visuals concerning all aspects of the relationship between the two countries, using LNG and the use of energy at large as our examining lens. In order to gather a great number of visuals, the team compiled a simple algorithm that, given a set of keywords, would collect images from the web. Search queries included “LNG production Qatar”, “LNG use Japan”, “economic wealth Qatar”, “gas cooking Japan”, “liquefaction natural gas Qatar”, “gasification LNG Japan”, “shipping LNG Qatar Japan”, “agreements Japan Qatar”, etc. Furthermore, we used the same keywords to search for textual information that our software would then summarize
in short sentences. This technique of gathering data is known as *Web Scraping* (Glez-Peña et al., 2014; Mitchell, 2018). Because of the nature of web searches, especially when automated and conducted in large numbers, the results would expand from the direct queries themselves, returning unexpected and inspiring results, thus enlarging our view beyond the mere trade between the two countries.

At this point, we identified three groups of visual information: *Japan*, *Qatar* and a third one that we later named *The Space in Between*. Images in the first group were mostly about the local LNG facilities, the life in Japan in relation to energy consumption, and some unexpected results about Japan’s tradition and culture. Images in the second group turned to be mostly related to the wealth and luxury of Qatar, local customs, extraction facilities for LNG. Finally, the third group category featured visuals equally related to both countries, with politicians shaking hands, LNG shipping routes, graphs about LNG price changes, and so on.

In this way, we compiled a database of visual and textual data automatically organized in the categories – hence folders – that we had adopted to *scrape the web*.

**The Installation**

Once we had collected this great wealth of visuals and words, the challenge was to find a way to deliver them to the audience of visitors of the exhibition. There were a few goals that the team had set for itself. First, since the beginning of the project, there was the intention of producing a printed publication about the exhibition, as book design is one of the expertise of some members of the team. Second, we wanted the delivery of the visuals to be somehow compelling for the audience, and performative. Third, we wanted to highlight the idea of energy, energy use, and production. Finally, because of the nature of the images that were systematically downloaded from the web just like a regular user would do when searching online, we started taking into consideration the use of inexpensive consumer inkjet printers as an element for this installation. Furthermore, one of the members of the team had previously used printers in various creative ways for artistic projects, so some knowledge of possible printer hacks was already available at hand.

In previous experiences the one team member who experimented with inkjet printers, noticed that when hung from the ceiling, the printers swing, shake and move visibly while printing. Those movements, combined with the noise that printers normally emit when operating, resulted in a sort of expressive behavior that could be exploited for this project. In particular, relative to this research, the movement and noises seemed to be good qualities to symbolize the production and consumption of energy, the movement of LNG carrier ships on the sea, and even the Fukushima earthquake that started the relationship between Qatar and Japan.

With the decision of implementing the installation as an array of a number of printers, the installation started to take form. It was then decided to reflect the three different categories of collected data – *Japan*, *Qatar*, *The Space in Between* – physically in the installation. Therefore, in the exhibition space, the installation was organized in three sections.

The first section featured 27 hanging printers, organized in a cube-like installation, as shown in Figure 6. The idea was to recall the density of buildings in Japanese hectic cities, as well as the volumes of LNG silos situated on the Japanese coasts. Clearly, this section of the exhibition was dedicated to Japan and it had the task of delivering the visuals and texts related to the Japanese urban lifestyle, the Fukushima disaster, and the facilities dedicated to
receiving, storing and re-gasifying the LNG coming from Qatar. This physical part of the installation was named the Japan Section.

![Japan Section](image)

Figure 6: The 27 printers of the Japan Section arranged in a 3x3x3 cube-like configuration.

The second section of the exhibition was dedicated to Qatar. The arrangement in this section featured 10 printers arranged in two columns of 5 printers each, as shown in Figure 7. The two columns of printers arranged back-to-back had the role of hinting at the LNG extraction sites with their tall scaffolding towers, as well as the recently built skyscrapers of Doha. To those printers were assigned the images and short sentences resulting from searches concerning the luxurious lifestyle of Doha, its LNG plants and information about the Qatari economy. This part of the installation was named the Qatar Section.

![Qatar Section](image)

Figure 7: A partial view of the 10 printers of the Qatar Section arranged in two stacks of 5 printers each.
The third section of the exhibition was concerned with the intersection between Japan and Qatar, where all the visuals that were ascribable to both countries would converge. A set of 4 hanging printers arranged in a zig-zag horizontal line representing the waves of the ocean would print visuals and data about the agreements between the two countries, the ships transporting LNG and their routes, as shown in Figure 8. This part of the installation was named *The Space In Between Section*.

![Figure 8: The 4 printers of the Space In Between Section arranged in an undulated linear configuration.](image)

Once the installation was physically organized to fill the gallery space as shown in Figure 9, it was time for the team to focus on planning how the digital content collected through *Web Scraping* and organized into folders and sub-folders would be delivered through the printers arranged in the three physical sections described above. This was in fact a matter of programming a sort of choreography for the printers to perform their actions.

![Figure 9: Gallery view of the complete installation.](image)
How the installation works

The role of the hanging printers is the one of delivering images to the audience, while creating an engaging atmosphere. Printers are choreographed by a software that repeats the same sequence with a duration of about 10 minutes. In the beginning, the 27 printers of the Japan Section, begin printing gradually, starting from one side of the cube that they compose altogether, to the other side, like a wave moving from one side to another. This sequence was designed to hint at the tsunami that hit the coasts of Fukushima, and the consequent disaster. In this phase, printers would print mostly images and text sentences related to the Fukushima disaster, which were drawn from the sub-folders generated by queries including terms like “Fukushima disaster”, “Tsunami”, and other similar ones during the Web Scraping operations.

After that, the 10 printers of the Qatar Section, start printing, one after the other, starting from the bottom going to the top, throwing prints about the extraction of gas retrieved during the Web Scraping.

It is only then that the 4 printers of The Space In Between Section activate, thus shaking and printing images about the agreements between the two countries, LNG carrierships and routes. As those printers print, they swing back and forth somehow reminding of a ship rocking on the sea. Then, the printers of the Japan Section start printing images about life in Japan, and the ones of the Qatar Section deliver images about the wealth and luxury of life in the country. A documentation video of the installation in action is available on YouTube\(^1\) (Ref. removed for anonymity).

It is worth mentioning that designing and completing both the software part that controls the sequence of events performed by the printers, as well as the physical making of the installation including the data-cabling and hardware management was a challenging task (Figure 10 and 11). The team succeeded in tackling all the technical issues because the project itself represented a great motivation and a comfortable context for all team members, thus enabling a dialogue among the variety of expertise that each member contributed with (Innella & Rodgers, 2018).

\(^1\) https://youtu.be/kREVYdCQtD8
To the average visitor, this timeline of events may not necessarily be evident, but to us it was very useful to organize the movement of the printers and the delivery of contents. The movement and noise produced by the printers was surprising, daunting and yet captivating (Baird et al., 2005). A visitor might have not been able to really identify the earthquake, the production of LNG or the shipping of the LNG carriers, but it certainly helped create an atmosphere that would support the visuals being delivered in an expressive way.

**What the installation produced**

Our intention was not only the one of creating a kinetic installation chronicling the events that led to and characterized the Japan-Qatar relationship, but also, to produce visuals that would explore a possible – or maybe notional – identity resulting from this relationship. It was then that we decided to systematically feed the printed sheets from one section to another of the installation. So, prints dropping from the Japan Section would be collected and fed into the Qatar Section, and finally fed again in The Space In Between Section. Each sheet of paper would therefore feature three prints of visuals and words. Because the software we compiled would select images and words according to the previously set search criteria, and then randomly scale and place them on the paper sheets, the prints would overlay with each other creating interesting combinations and juxtapositions. The resulting mash-ups were ambiguous, cryptic, funny, but most of all revelatory of a relationship that is otherwise unnoticed by the average citizens of the two nations. In Figure 12 two examples of the produced mash-ups are shown. In the sheet in the left, you can see a rice cooker, most likely printed by a printer of the Japan Section, representing the use of LNG to produce electricity in Japan. Then, you can notice a luxurious car on the roads of Doha; this image printed by a printer of the Qatar Section depicts the wealth in Qatar enabled by the LNG export. Finally, there is a diagram about the evaporation of liquid gas; this image explicitly brings LNG as a factor in the equation “energy consumption in Japan = Wealth in Qatar”. Similarly, the image on the right features visuals from each of the three sections of the installation. These include an image of the Fukushima disaster, which led to a tighter relationship between Qatar and Japan, on the top of the sheet. In the middle there is an image of football player Lionel Messi being sponsored by Qatar Airways. At the bottom of the page, a map showing the LNG
export routes is featured. These two examples are representative of the level of ambiguity and information that the installation delivered. It is fairly easy to understand how these printouts would instigate thinking and conversations among visitors and authors.

Figure 12. Two examples of the visual mash-ups generated after each sheet would go through the three Sections of the installation.

Daily, after the closing of the exhibition time, the team would collect the prints and select the most interesting ones. The selection of prints was scanned and skillfully laid out in an artbook titled eponymously, -162°C Trading Power and made available in a limited number of copies (Figure 13)(Water With Water, 2020).

Figure 13. Some copies of the book/catalogue of the project, collecting a selection of printed mash-ups.
Insights

Throughout the duration of this one-week exhibition at the Wieden+Kennedy Gallery in Tokyo, over 300 visitors turned up. Visitors were mostly Japanese. While they were mostly entertained by the behavior of the printers and by the association of images resulting from the multiple print overlaps, they also admitted to be largely unaware that the gas they use daily to cook, or the gas powering the new iconic Tokyo taxis was coming from Qatar. Visitors did not know that Japan is the biggest contributor to Qatar’s wealthy economy, and they were not informed about the fact that this unlikely relationship started as a consequence of the Fukushima disaster. -162ºC, Trading Power proved itself as an opportunity to inform and converse, learn and reflect, with hundreds of citizens who have the right to know where the commodities they use come from and why. This project unveiled to its authors the potential of using the design language as a way to create a context and a medium to engage with an audience that otherwise would not be reached.

Conclusions

Each artefact around us tells us something about the world we live in. Beyond the society’s needs and desires, beyond the aesthetic and functional decisions of a designer, products are the manifestation of our economies and politics. As the economies and politics of the various countries of this world are intertwined with each other, products often relate about the global relationships we are all embedded in. Learning to observe, dissect and deliver the complexity of information that is contained in a product represents a great challenge, but also an opportunity for design critics, historians, and most importantly for design practitioners and researchers.

Design is a broad and complex discipline and industry. Each artefact surrounding us hides a convolution of relationships, events, economies and politics. This paper chronicled and reflected on a project exploring design as both a starting point to analyse geopolitical relationships, and a medium to deliver information in an experimental and experiential way to a broad audience. Starting from the emergence of a new LNG-powered taxi in Tokyo, one can discover the geopolitical relationships between two faraway countries like Japan and Qatar. Studying that geopolitical relationship, one uncovers the recent history and agenda of each country. Delivering such an intricacy of information to a broad, unaware and possibly uninterested audience is difficult, unless, we make use of our skills as creative professionals. Those skills include the visualization of information, spectacularizing its delivery and going beyond the limitations of a linear and purely informative narration. -162ºC, Trading Power takes advantage of all these qualities designers possess in order to generate an installation that raises awareness on the geopolitics between Qatar and Japan while providing entertainment for the audience and exploring new aesthetic languages, even hinting to more or less fictional visual identities that better reflect the political and economic status quo of the countries we live in.

The approach highlighted in this paper can be summarized fairly easily. First, identify a designed artefact that is the result of a politico-economical relationship between two or more countries. Second, analyse the history and dynamics of the relationship. Third, deconstruct each component of that relationship and find a creative and engaging way to deliver the information, even if that means scarifying the linearity of the narration. Fourth, expose a broad and diverse audience to the resulting work, and engage in conversations with the audience in order to inform the visitors about the content of the work. While this way of
summarizing the work process might seem simplistic and prescriptive, it actually allows a great amount of creative freedom to be adaptable to a wide variety of creative practices and contexts.

**Similarities with GEO–DESIGN**

*GEO—DESIGN* is a term that is being used to indicate a number of different things. In one of its most recent uses, it has been adopted to name a novel master course and a research platform of the famed Design Academy of Eindhoven. Directed by the renowned Amsterdam-based design duo FormaFantasma, *GEO—DESIGN* is described as following:

> [...] This platform explores the social, economic, territorial, and geopolitical forces shaping design today. The department GEO—DESIGN acknowledges the legacy of industrial production as the fundamental source for the designer's expertise and agency in contemporary society while problematizing and addressing its historic contribution to environmental and social instability and its incompatibility with models of sustainable or even survivable futures. (FormaFantasma, 2020)

*GEO—DESIGN* can therefore be seen as an approach that uses design to observe and relate about the complex dynamics of our local and global realities. We see the project *-162°C, Trading Power* in harmony with the approach described by FormaFantasma. So far, the *GEO—DESIGN* platform has curated and organized three exhibitions at the VanAbbemuseum in Eindhoven – namely, *GEO—DESIGN: Alibaba. From here to your home* (Design Academy Eindhoven, 2018; Van Abbemuseum, 2018); *GEO—DESIGN: Junk. All That Is Solid Melts into Trash* (Design Academy Eindhoven, 2019; Van Abbemuseum, 2019); *GEO—DESIGN: Sand. The Building Block of Modernity* (Design Academy Eindhoven, 2020; Muzi & Petrik, 2020). Similarly to the above mentioned exhibitions, *-162°C, Trading Power* represents a research project about relevant geopolitical dynamics manifested in a creatively designed exhibition that delivers information and offers a context for debate. The fact that there are examples of similar approaches merging design practice, research and curatorship is encouraging and a sign of the fact that this might constitute a relevant area to keep exploring.
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Axiomatic Dimensional Analysis of Art in the Visual Culture of the Ibibio People of Nigeria

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Abstract
The research into visual culture, vis-à-vis art praxis and product, keeps on turning up as tangential to the history, context and practice of socio-cultural variables prevalent in specific cultural settings, despite the fundamentality of image flows and visual technologies in both the rural and urban domains of contemporary society. This study focused on this hiatus, first by presenting a detailed account of the central concepts and theoretical principles of visual culture in relation to their art in contemporary cultural milieu. It expressed some distinctive noticeable behavioural patterns of the Ibibio people in various forms, such as, indigenous fashion, pottery, native textile production, sculpture, painting and decoration, aboriginal drawings, music, and dance, among others. The study also articulated the creative abilities of the people which are manifested in their visual arts, folk songs and nsibidi writing – the original writing of the Ibibio people. The objectives of this study were to analyze the evolving trends of visual culture in both the rural and urban centres of the Ibibio society and to assess the dimensions of the art tradition relative to the extant visual cultural practice. The study benefitted from thematic analysis as a method of interpreting patterns and meanings in the data obtained. It is expected that appropriately directed and controlled elements of the visual culture of the Ibibio people can contribute to critical introspective enquiry of the framework and substance of the visual culture of the Ibibio people to boost sustainable visual culture of the people in Nigeria.

Keywords: Art, Visual Culture, Ibibio People, Axiomatic Dimensional Analysis, Behavioural Patterns

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Introduction

The making and usage of art among the Ibibio people of Nigeria, as in other cultural settings in Africa and beyond, is a crucial index of the visual culture of her people. Every society, whether traditional or contemporary, obviously flaunts some unique perceptible behavioural patterns by which they interact, express their ideas or communicate among themselves. These perceptible behavioural patterns may be in the form of dress/dressing, speech, dance, gesticulation, mannerism or art, among others, and constitute the culture of the people.

The culture of a people is predicated upon the behavioural pattern of that people. Thus, culture can be defined as the “shared patterns of behaviours and interactions, cognitive constructs, and affective understanding that are learned through a process of socialization” (Banks and McGee, 1989). These shared patterns identify the members of that culture group and, at the same time, distinguish those of another group. Banks and McGee (1989) further opine that today, culture can be viewed “as consisting primarily of the symbolic, ideational, and intangible aspects of human societies”. They are also of the opinion that the essence of a culture is not its artefacts, tools, or other tangible cultural elements but how the members of the group interpret, use, and perceive them. It is the values, symbols, interpretations, and perspectives that distinguish one people from another (or the others) in modernized societies. Therefore, it can be deduced that culture emanates from learning and sharing human patterns or models for day-to-day living among members of a given society or group. These shared patterns or models pervade all facets of human social transactions and cultural practice.

Cultural practice commonly denotes the materialization of a culture or sub-culture, especially in regard to the traditional or customary practices of a particular ethnic or other cultural grouping. In its broadest sense, the term cultural practice can relate to any person or persons exhibiting any characteristic of any culture at any time. This, in practical standard, however, often refers to the traditional practices developed within specific ethnic cultures, particularly, those facets of culture that have been practiced since ancient times. These perceptible cultural elements aptly denote that society’s visual culture.

Visual Culture

There are distinguishable visible features and tenets which identify and portray every society of the world: these, together, make up the visual culture of that society. Visual culture, thus, is a term that refers to the tangible, or visible, expressions by a people, a state or a civilization, and collectively describes the characteristics of that body as a whole (Kelly, n.d.). It is also a way of studying visuals through the use of art history, humanities, sciences, and social sciences. In fact, it is interwoven with everything that the eye can see – people, animals, cars, buildings, landscapes, advertisements, photographs, arts (paintings, sculptures, graphic arts, ceramic arts, textile arts, among others), movies, activities, apparels and, practically, anything within our culture – that communicates through visual means. The Ibibio princess in cultural attire (fig. 1.) and the Benin ivory mask (fig. 2.) are just two examples of visuals which are entrenched in the visual culture of two Nigerian societies. Visual culture, essentially, focuses on production, reception, and intention, as well as economical, social, and ideological aspects of life (Schleimer, 2008). It reflects the culture of the variable and analyzes how the visual aspect affects it. Schleimer (2008) further avers that “visual culture highlights issues concerning the visible object and the viewer – the interrelationship of sight, knowledge and power”.

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Taking into account the social, economic and educational atrophy that many traditional Ibibio artists – trainees and experts alike – face, the concern towards pecuniary exploit above social and ethical achievement engages a much higher stratum than any proficient or academic sophistication on some abstract models that underpin the production of art. The study of the visual culture of the Ibibio people of Akwa Ibom State of Nigeria thus interrogates the visual cultural forms that go beyond the frontiers of media. In fact, it presents an enquiry into what meanings they generate in the different settings where they come into play. For instance, do Ibibio artists in the contemporary milieu care about how their works are perceived, evaluated, processed, and classified? Do they care about contributing to visual culture discourses in an environment where society is principally nonchalant about an incomprehensible discussion that blossoms primarily on absolute academicism? Does it matter that the arts of the Ibibio people are classified as modern or contemporary, popular or traditional? What is the position of the artists on the visual culture in the contemporary dispensation?

Visuals are ubiquitous: they are found along roads, streets, in homes, offices, streams, bushes, forests, at shopping malls, or even on the Internet (Sampson and Sampson, 2020). Expressed in packaging, signs, logos, bills, receipts, leaflets, books, mobile phones, appliances, advertisements, graphic designs, films, typography, body prettification, and countless other examples, visuals convey messages and play very vital roles in the culture of a given people. In the contemporary circumstances, it is apparent that people in a particular cultural setting find themselves enveloped and, even, bombarded by images. Thus, the evaluation of a visual culture is mainly based on measuring comprehension by the audience within the cultural setting, not on personal aesthetic and/or artistic preference, as the “aesthetic principles that people value in art change dramatically from decade to decade” (Kreie, n.d.). Visual culture is expressed not only in two-dimensional or three-dimensional images, but in several other ways as well, including gesticulations and body language (figs. 3 and 4), puppetry, animation (digital or analogue), and film.
The offerings of visual culture embrace perspectives that address a number of cultural problems by interrogating visual cultural forms that transcend the boundaries of media. It presents an enquiry into what meanings they generate in the different settings where they come into play, what histories they have, where they can be seen, the different forms they take, and the forgotten or invisible indices as the phenomenon re-emerges in new settings over time. A recent study (by Kari Andén-Papadopoulos) of the history of the photograph of New York firemen raising a flag in the ruins of the World Trade Centre (fig. 5) is an example, as she traced its use through a range of display forms and interviewed people about what this controversial image meant to them (Andén-Papadopoulos, 2004).
Art in the Contemporary Milieu

In the contemporary setting, the visual environment is clustered with, and barraged by, a plethora of images. Expressed in packaging, signs, logos, bills, receipts, leaflets, books, mobile phones, appliances, advertisements, graphic designs, films, typography, body prettification, and countless other examples, art conveys messages and plays very vital roles in the visual culture of any given society. On a daily basis, people use, come across or are influenced by a sizeable number of visuals which, consequently, find expressions in the visual culture of the environment they find themselves. This situation, typified as an image flow, increases in its concentration as the channels and bases of image creation and circulation are apt to assume a geometrical progression of expansion. Art, vis-à-vis, the visual arts, is usually considered the most common means of information dissemination, of self expression, and of inspiration to others. These play vital roles in the development and utilization of the visual culture of the Ibibio people of Nigeria.

Dimensions of Art in the Visual Culture of the Ibibio People

The visual culture of the Nigerian people embraces munificent facets/amount of art. Opposed to extant contemporary art tradition, the art practice among the Ibibio people is not skewed towards definite art specialties such as graphics, painting, or sculpture, but is open to an implausible exploration of local and universal ideas, whether formal, informal or semi-formal. The art is not classified into groups with regard to which genre they belong, or the methodical connections and disparities, within the practice (Hughes, n.d.). Yet, products thereof are set to be exhibited to both local and international audiences when the need arises. The goals and dynamics of art practice in the contemporary Ibibio setting have changed, and have become much more diverse and free because of the need of the times. This, as with any African creative work, is a direct manifestation of the contingent ambience within this very setting. Each art practitioner or group of practitioners engages in a sole venture or adventure. As a corollary, each of the works so created, exhibits a substantiation of adventurism and, in the opinion of Hughes (n.d.), “evidence of experimentation, of research, and an openness that seek to break the barriers of cultural stagnation through the combination of emotional and intellectual acuity”. Since culture is dynamic and prone to manipulation and change, the creative designs produced currently by the Ibibio artists are but a “fabric of the cosmopolitan melting pot, a protean of its past, a reality of its present and a determinant of its future” (Hughes, n.d.). The art of the Ibibio people is not only directional, but purposive, and ranges from two-dimensional designs to three-dimensional art forms. These find expressions in sculpture, textile design and production, architecture, pottery and painting/graphics, not necessarily in the modern sense of the specialties, but in the basic understanding thereof.

Art practice among the Ibibio people is, in the view of Sampson (2018), “predicated upon the need of the tradition or custom of the people, such as rites of passage, coronations and seasonal festivals”. Other reasons for creating works of art hinge on the demands for some of these arts to enhance self-esteem, pride and the advancement of the dignity of some prominent individuals within the society. Such artworks are not just art for art sake, but carefully crafted designs that bear important narratives to the anticipated rationale.

Sculpture – Mud sculptures and wood carvings

The sculptural art of the Ibibio people are majorly mud sculptures and wood carvings. They manifest in the likelihood of baby dolls, divination figures/figurines, puppet figures and masks for various masquerades such as Ekong, Ekpo, Akata and Ekpe, and many more.
Fig. 6. Ibibio puppet carvin

Fig. 7. Ekong puppet figure

Fig. 8. Ibibio mask for Ekpo masquerade

Fig. 9. Ekpo masquerade mask (with fibrous attachment)
Fig. 10. Ekpo masquerade displaying his dance steps

Architecture:

Fig. 11. Traditional architecture of the Ibibio people

Textile design and production:

Fig. 12. Textile design/product

Fig. 13. Ibibio visual culture expressed in tufted textile art
Fig. 14. Maidens dancing in traditional attire

Fig. 15. Utu-ekpe (traditional gymnastics)

Pottery:

Fig. 16. Decorative earthen pot for divination
Painting/graphics

The concept of painting and graphics in the Ibibio traditional setting is rather adversative to contemporary comprehension of the idea. For instance, there is no clear delineation between painting and graphics: paintings are mostly graphically rendered. These include, but are not limited to, body prettification, mural painting, nsibidi graphical symbols, and many more. Nsibidi, a complex of sacred/secret writings, is made up of signs and symbols (figs.); the use thereof plays a vital role therein, and in other art specialties such as textiles. The majority of the decorative patterns observable in Ibibio arts originates from Nsibidi symbols. That is to say that many of the art forms evidenced in Ibibio traditional art milieu have allusion to the graphic symbols of Nsibidi. They are, as well, conceptually inspired in the visual culture of the Ibibio people through traditional art forms such as carvings, sculptures, paintings/drawings/graphics, pottery and textiles, among others (Sampson, 2016).

Fig. 19. Early nsibidi symbols
Source: nsibidi.wikia.com/wiki/Nsibidi
Figs. 20 – 35: Some Nsibidi symbols (excerpts from Nsentip, 2008:65 – 67)

Fig. 36. Adaptation of nsibidi in art production

Figs. 37/38. Application of nsibidi design on facial prettification
Fig. 39/40. Wall paintings
Source: University of Uyo (Town Campus), Nigeria

Fig. 41. Decorative art of the Ibibio people
Source: University of Uyo (Town Campus), Nigeria
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custom of the people, such as rites of passage, coronations and seasonal festivals” (Sampson, 2018).

**Conclusion**

Visual culture portrays the collective substantiation that overlies the boundaries of the varying approaches understanding culture – whether sociological, anthropological, political or religious, and the problems encountered in an attempt to outline the boundaries between them. The features ascribed to that evidence provide a conduit towards expressing the collective identity of that people and their unique way of thinking.

The visual environment today is clustered with, and bombarded by, an overabundance of images expressed in diverse forms. Art communicates messages and plays very fundamental roles in the visual culture of any given society, especially, as it is usually deemed a universal means of information dissemination, of self expression, and of inspiration to others. These play vital roles in the development and utilization of the visual culture of the Ibibio people of Nigeria.
Reference


Becker, Karin (2017). Where is Visual Culture in Contemporary Theories of Media and Communication?


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The Future of Small-to-Medium-Scale Production of Ceramics: The Use of Thermoplastic Polyurethane 3D Printing to Produce Molds in Educational Institutions

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Abstract
Using 3D printers to create molds for ceramics arts and industries is one of the new techniques influencing these creative fields. The role of thermoplastic polyurethane (TPU) in the creative industries has received increased attention across a number of disciplines in recent years. It is well known that TPU is a flexible, durable material, and it is considered a suitable material to create ceramic mother molds because of its abrasion-resistant thermoplastic nature. However, the most important reason to use TPU in ceramic plaster molds is that the plaster can be extracted from molds very easily and all the copies will be typically similar to each other. There is an urgent need to address the problems associated with using this technique in ceramics educational institutions. The aim of this paper is to experimentally explore the use of TPU 3D printing in developing ceramic molds and draw the attention of mold-makers to the best practices to solve these challenges.

Keywords: TPU Molds, Ceramics, Art Education
Introduction

Thermoplastic polyurethane (TPU) was invented by Lubrizol for commercial use in 1959. A large and growing body of literature has since investigated the physical characteristics of TPU material, which is usually categorized between rubber and plastic (Nihal et al., 2019). However, it is possible to customize TPU from a softness that is similar to rubber to a hardness like rigid plastic. Because of its thermoplastic nature, its extreme flexibility and exceptional load capacity mean that this type of material has many benefits in the design field, including ceramics. TPU can be processed in the same manner as in traditional thermoplastic manufacturing, but the most useful methods in recent times have been printing via SLS or FFF 3D printing machines (Bates et al., 2016).

A major advantage of using TPU is that it is abrasion-resistant, meaning that the plaster can be cleaned effortlessly between castings. It has also been selected by manufacturers for its reliability and validity in terms of chemical resistance, and because of that, this material is mostly considered the best for industrial use. For ceramicists, however, the most important characteristic is flexibility, which allows the maker to remove plaster from the mold very easily. This can explain why ceramicists prefer (low-temperature performance) TPU in plaster mold-making. In general, we can summarize TPU’s benefits being its flexibility, softness, optical clarity, chemical and hydrolytic resistance, approved skin contacts safety, bio-based and recyclable composition, easy-to-extrude nature, antimicrobial resistance, and abrasion, impact, and puncture resistance. TPU has become the most preferred material to produce ceramic molds because of its flexibility in terms of offering great mechanical properties, such as high tear and tensile strength. The TPU material opens up a world of unlimited possibilities for countless industries and products, including shock absorbers, cables, hoses, mobile phone covers, automobiles, footwear, functional prototypes, tires, and ceramic molds.

![TPU Properties](image)

**Figure 1: TPU Properties (Bjorn Thorsen, 2020)**

Technically, when using FDM printing technology, the maker has to apply a thin layer of glue to the print bed before printing models with TPU. Because of the nature of these probable materials, it is also suggested that the extrusion nozzle must reach a temperature between 210 °C and 235 °C to melt the filament. In fact, a temperature of at least 200 °C is essential to melt the material, so most 3D printing machines will not start creating the object before reaching this temperature. Rather than applying the normal technique of using a single
extrusion nozzle to print TPU, some researchers developed an innovative method for the
direct fabrication of multiaxial force sensors to create 3D printed objects using flexible
materials (Kim et al., 2017).

Recently, one of the best examples of using the 3D printing technique was created by
designer Dov Ganchrow in his project V300. According to Ganchrow, “The V300 project
was a conceptual project looking at small-to-medium scale ceramics production and making
use of 3D printing in the updating of the manufacturing process. A 3D printed ‘mother mold’
(actually only the part of the mold that has the end-products geometry is printed, the constant
forms are still injection molded) that has plaster poured into it to create a product that in the
ceramic industry is called a ‘plaster mold’. The plaster mold is filled with slip – a fluid
ceramic material and when this solidifies, (and after firing) we have a ceramic end product
such as a vase. So basically I designed a mold that makes molds, hence the term ‘mother
mold’” (Bentur, 2017).

![Figure 2: V300 Molds Production System by Dov Ganchrow, photo by Moti Fishbain (Leo Lane, 2017)](image)

**Slip Casting in Ceramics Arts and Industries**

Slip casting is a process of using clay in liquefied form that is poured into a mold, which is
usually made of plaster of Paris. Slip casting liquid becomes stiff when attached to a plaster
mold’s internal walls (Martin, 2007). A considerable amount of literature has been published
on slip casting from the 19th century. It was not until the late 1820s that historians considered
slip casting worthy of scholarly attention. According to Frith (1992), Simeon Shaw was the
first to write about the slip casting technique in 1829. Three years later, the Rev. Dionysius
published more details about the technique of slip casting with clay slurry in plaster molds.
According to the description of this technique, the ceramic piece can be formed when the
mold absorbs water from the casting slip (Raffie et al., 2018). The process of casting clay in
plaster molds was actually invented many centuries ago, and classic publications of the early
20th century documented this process regarding ceramics industries. For example, Walter
Shearer (1928) mentioned in his paper that producing a desirable flowing quality in a slip is
proposed as a means of controlling its casting quality. In addition, Schramm (1934)
confirmed that the casting behavior of clay in plaster molds depends on the properties of the
mold, the slip, and the casting design shapes; in fact, the water retention of the casting is of
particular significance, and experiments reveal how this depends on the nature and condition of the slip as well.

**Experimental Stage 1: Designing the TPU Mold**

In this study, TPU 95A flexible material was commercially obtained from eSun and used to form the mother molds for ceramic casting. According to its technical data sheet, this material degrades in the range of 240–250 °C. It is also mentioned that this TPU has a density of 1.19 kg/dm, a hardness of 93 Shore A, a tensile strength of 40 MPa, and elongation at break of 550%. The manufacturer confirmed that at the end of printing of the final product, the mother mold will be opaque black, a very soft texture, extraordinarily elastic, and have high resilience. Table 1 below shows the ingredients of the filament according to the safety data sheet:

<table>
<thead>
<tr>
<th>Ingredient Name</th>
<th>Content (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>C6H10O4</td>
<td>50%</td>
</tr>
<tr>
<td>C4H7NO</td>
<td>30%</td>
</tr>
<tr>
<td>C4H10O2</td>
<td>20%</td>
</tr>
</tbody>
</table>

**Table 1:** The ingredients of the filament used in this project according to the eSun safety data sheet

Using AutoCAD, the forms of the ceramic mother molds were created in two pieces. The logo of Sultan Qaboos University (SQU) was added to use the final copies of the ceramic pieces in the ceramic’s laboratory for glazing tests in the future. The thickness of the surrounding walls of the molds was 3 mm to guarantee the easy extraction of gymsums molds from the TPU mother molds, and the remaining walls of the TPU mother molds were at a right angle (90°) while standing after pouring the gypsum slip. According to the 3D printing invoice sheet, the quantity of TPU that was used to complete both mother mold parts was 650 g, and the period of time to print them was 30 hours. At the end of the printing process, the final two pieces were as shown in Figure 3, and they were ready for the plaster stage.

**Experimental Stage 2: Producing Plaster Copies**

After the 3D printed TPU mother mold was designed in the first stage of experimentation, it was ready for making some copies of the final plaster molds. It is well known that molds for ceramics made from plaster absorb moisture from slip casting clay. This type of mold usually causes the clay to shrink after forming in the plaster mold and makes it easier to remove the molded pieces.

Plaster of Paris was used in these research experiments. This type of plaster, which is composed of calcium sulfate hemihydrate, comes as a fine white powder gypsum that stabilizes when soaked with water and allowed to dry for 10 to 15 minutes. Plaster of Paris does not commonly crack or shrink when dry, so it became an exceptional material for casting ceramic molds. In this project, 10 ceramic plaster molds were made to produce sufficient copies of ceramic test pieces.
Experimental Stage 3: Producing Ceramic Copies

For casting copies in the plaster molds, CWE White Earthenware Clay was used, which withstands temperatures of 1080–1160 °C in an electric kiln. According to Pottery Crafts, the producer of the clay, the shrinkage of this clay is 3–5% after drying and 4–6% after firing. The product was supplied in a plastic state, and after the clay dried, it mixed very well with water using a drill mixer to produce a usable consistency of liquid for the slip casting process. Then, all the produced molds were filled with the slip to make as many copies as possible of the ceramic pieces. All the pieces extracted from the molds were fired up to 1000 °C for bisque firing.

Conclusion: The Advantages of Using TPU in Art Production

The table below shows the most significant advantages that ceramists can experience by using TPU printing for plaster mold casting:

<table>
<thead>
<tr>
<th>Advantage</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Time management in industrial and educational environments in case of using TPU</td>
<td>The material composition of TPU allows it to be used for unlimited copies of plaster molds if the TPU mother mold is used for industrial purposes. It can also be used for artistic purposes if the artists request multiple copies. As plaster mother molds can only be used for limited copies of plaster molds, TPU mother molds are an excellent choice for ceramics industries.</td>
</tr>
<tr>
<td>Accuracy (keeping details of the design)</td>
<td>The plaster molds extracted from the TPU mother molds were very accurate, and all details appeared to be outstandingly clear.</td>
</tr>
<tr>
<td>Meeting customized design specifications requested by end-users of ceramic products</td>
<td>For any ceramic artistic projects, the TPU mother molds can play an outstanding role in meeting the customers’ requirements, especially if high quantities of pieces are requested or pieces are occasionally requested according to customers’ desires.</td>
</tr>
<tr>
<td>Avoiding plaster mother mold defects</td>
<td>The use of the TPU mother molds increased the quality of the final products, and laboratory tests showed that no defects appeared on ceramic molds or ceramic pieces extracted from these molds.</td>
</tr>
</tbody>
</table>

Table 2: Advantages of using TPU printing molds for ceramics industries
References


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**Future Digital Finance: Ethnic Traditional Jewellery as Intangible Heritage and Its Influence on Places’ Assets**

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Made Ika Prastyadewi, University of Mahasaraswati Denpasar, Indonesia  
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Pamilasih, Amalia Jewelry Surakarta, Indonesia

Abstract  
It is impossible to emphasize the importance of intangible cultural heritage. Create a lasting impression in the minds of future generations by holding your own in a cutthroat industry. For many people, the allure of traditional jewellery lies not only in its aesthetic appeal but also in the deeper meanings and beliefs it represents when employed in the performance of age-old rites. It is possible to assign a monetary value to this intangible asset. This research intends to analyse the potential of intangible legacy to help future growth and development of the digital economy, and it does so by focusing on traditional Indonesian jewellery. To remain competitive in the years to come, this is a goal we must achieve. The study employs a qualitative approach and collects data using digital mapping. Two significant hubs for ethnic Indonesian jewellery production, Bali and Sumba are the primary targets of the investigation. Integrating the Intangible Living Heritage into the digital economy sustainably is achievable through the use of time series, scarcity hierarchy, and authentic features based on the uniqueness of the location and its affinity to it.

Keywords: Intangible Place Heritage, Heritage Assets, Ethnic Jewelry, Digital Economy
Introduction

All parties involved in the preservation, repair, and utilization of historic structures derive an economic advantage. As a result of cultural preservation, property values and tax revenues may increase, in addition to the creation of new jobs, rejuvenated communities, and economic expansion. It is not novel to assign a monetary value to cultural artifacts to demonstrate the economic and social benefits of conservation. There have been many economic studies conducted on a global scale. Rare public properties, such as world-famous landmarks and tourist attractions, are the subject of numerous studies, and no sane person would ever propose destroying them (Timothy, 2014). Because recreational perception values and bequest values are the two most vital forms of wellbeing that heritage generates, both of these types of values have been identified for this legacy that cannot be denied for its undeniable significance. The value of cultural heritage is evaluated from three perspectives: the recreational perception value, the inheritance value, and the home comfort value. Because the discussion in this paper is not concerned with a heritage that is clearly significant and well-known, but rather with a past that is less well-known by the current generation, mostly privately held, and hence more threatened, the extra value of home comfort entered into the picture. Home comfort in heritage is related to familiarity, and somehow the value of familiarity is related to the economy.

Cultural heritage protection not only benefits the economy, but it also helps to retain local and national identities, as well as pride in those identities, and it serves to remind people of their common history and the progress they've made. People who have a strong attachment to a certain location report better levels of well-being and overall life satisfaction. This is good for the health and happiness of an individual (Rasciute & Downward, 2010). A recent study emphasizes the significance of cultural legacies to nations and their potential to contribute to a nation's social, economic, and environmental goals. Cultural inheritance enriches people's sense of identity and belonging, which not only supports but also enables sustainable development in terms of economic growth (such as increased tourism and local employment). The amount of societal benefit generated because of cultural legacy is one way to think about how to quantify the economic value of cultural heritage. This concept of well-being includes both the material and metaphysical aspects of well-being. The overall well-being generated by cultural heritage outweighs the monetary benefits generated by historical artifacts or regions because of exploitation for monetary gains, such as in the case of tourism. Benefits that are not directly tied to market economic functioning, such as recreational perceptual pleasures, are also considered. Economic valuation approaches, such as Contingent Valuation and Hedonic Pricing, which are frequently used to determine the monetary value of nature and the environment, enable such advantages to be quantified and measured (Blake, 2000).

History preservation is vital for a multitude of reasons, including cultural, aesthetic, educational, environmental, social, and historical factors. The economic value of historical preservation is a very new addition to this list of advantages, which formerly solely covered cultural advantages. This component of adding value was ignored since it was believed to be both insulting and dismissive of the historical treasures' significance to be investigated in depth. Purists in heritage conservation continue to resist economic measures and advocacy for historic preservation on the grounds that these efforts devalue and disdain the spiritual and metaphysical aspects and importance of humankind's-built patrimony (Nasr, 2005).

However, many of people with the most influence over what happens to our legacy resources are preoccupied with the economic implications of ancient structures in the short term.
Property owners, politicians, bankers, and investors are among them. Because of the economic benefits, these decision-makers frequently come around to supporting historic property preservation for other, more important reasons. The educational, environmental, cultural, and social consequences of preserving historic resources outweigh the economic benefits.

The purpose of this study is to shed light on the value of traditional jewelry in establishing a region's authenticity so that it can compete successfully on the global stage. This will be accomplished by identifying the main features that will become economic variables in the development of the digital economy in the future.

**Literature Review**

**Heritage and The Economic Value**

Indonesia's many cultures make this nation have various cultural identities. Ethnic diversity is one of the foundations of the Indonesian government in building identity within the framework of cultural diversity. The diversity of Indonesian culture is also the national identity of the country. The richness of cultural language has given birth to various Indonesian arts and cultures. Van Ham's writing explains efforts to build Indonesia's national identity through the nation brand, which states that a country's brand exists because of recognition from other countries or the international community for an identity that already exists in that country (van Ham, 2008). Indonesia's abundant cultural heritage is a data attraction in the Indonesian tourism sector in addition to natural resources. Many tourists visit areas in Indonesia not only to enjoy nature but also to learn and enjoy various cultural heritages, including dance, music, and various historical sites, including buying and enjoying a variety of Indonesian jewellery.

Cultural values have multiple functions. The values contained in the arts are reassuring, inspiring, and appreciative. The values contained in painting, fine arts, sculpture, jewelry, palaces, temple buildings, and cultural heritage become an attraction, tool, and place to communicate with tolerance. Many meanings and heroic stories in the cultural heritage are listed and carved on the ornaments of the building (Rachman, 2012). Even culture has an economic value that makes it an object of "selling" with a value that exceeds expectations. Like batik, a commercial product with inherent national value, the variety of jewelry in the archipelago can be a similar asset. Because in jewellery, there is not an only economic value which generally comes from raw materials, but also cultural value from the shape or symbol attached to the object.

Cultural heritage plays as an alternative new economic source. Cultural heritage in Indonesia will produce various benefits if appropriately managed, with the application of the rule of law that is also correct and appropriate. At least some benefits can be obtained from using cultural heritage as a new source of Indonesia's economy, that the development of culture-based products will revive the identity of the Indonesian nation. Economic acceleration based on traditional knowledge and art can help improve the economic welfare of the community groups of stakeholders and actors of the tradition concerned (Petronela, 2016). Suppose the rich diversity of cultures and traditions is managed properly and correctly. In that case, Indonesia's economic revival may be triggered not because of technological sophistication but because of tradition's beauty and cultural heritage diversity.
Future Digital Heritage Culture

Computer-based assets of enduring worth that ought to be preserved for future generations make up digital heritage. Digital legacy comes from a variety of communities, businesses, sectors, and geographical areas. Not all digital resources have lasting significance, but those that do necessitate proactive preservation techniques to preserve the continuity of digital legacy (Cooke, 2020). Humans are producing and distributing digital resources in information, artistic expression, ideas, and knowledge encoded for computer processing that they value and desire to share with others through time and across location by using computers and related tools. This is proof of a digital past. It is a heritage made up of numerous components, many of which have things in common, and it faces numerous risks (Pan et al., 2013).

Essentially, telling the story is purpose of the cultural heritage section. What does include in the story? They can be historical, artistic, sociological, psychological, contemporary, or ancient story. Whatever the experience, the story is central. Until now, these stories have tended to be passive (Ivanovic & Saayman, 2013). Exhibitions and tours where visitors can tell stories through their eyes. But digital offers new and exciting possibilities that put the visitor at the centre. Encourage active two-way dialogue and position visitors as participants rather than audiences.

Intangible Heritage and The Value Assets

The discussion about the need for the protection of culture has become an important issue today, and this is due to the rise of claims that Indonesian cultures are claimed to be owned by foreign countries. However, this issue has actually been a subject of debate at the international level since 2001, when the first session of the Intergovernmental Committee on Intellectual Property and Genetic Resources, Traditional Knowledge and Folklore (IGC GRTKF) was held at the WIPO headquarters in Geneva, Switzerland. The substance of traditional knowledge and traditional cultural expressions has been the subject of debate since 1967, when the Bern Convention for the Protection of Literary and Artistic Works added Article 15.4, which states that works that have not been published and whose authors are not known, can be protected, as copyright if it is suspected that the creator is a citizen of a party to the convention. In addition, state parties to this convention are required to appoint competent authorities to provide protection.

Based on the UNESCO convention 2003, intangible cultural heritage is a variety of practices, representations, expressions, knowledge, skills, instruments, objects, artifacts, and related cultural spaces. Where in some cases, a community, group, or person can also become an intangible cultural heritage. Intangible cultural heritage is intangible/abstract, such as concepts and technologies that can pass and disappear over time, such as language, music, dance, ceremonies, and other structured behaviors. The protection in question is all forms of efforts to protect Traditional Cultural Expressions against use that is carried out without rights and violates propriety (Asri, 2018). The protection of traditional culture as part of traditional knowledge is essential, at least for 3 (three) reasons, namely:

1. There is potential for economic benefits resulting from the use of traditional knowledge,
2. Justice in the world trading system, and
3. The need to protect the rights of local communities.
This potential for economic benefits, which then makes a cultural heritage needs to be protected by law so that it does not become a source of profit for an unauthorized person or group to the detriment of the community that owns the cultural asset.

Knowledge, information, reputation, and several other intangible things can provide a competitive advantage to individual businesses as well as nations in general. This is because the modern information society places a greater emphasis on the importance of intangible values (Bontis, 2001). The percentage of intangible capital that makes up a nation's total wealth is growing in the majority of prosperous countries. In modern economics, there are no reliable criteria for distinguishing intangible legacy, intangible national wealth, and intangible property. This leads to the confusion of notions and complicates the creation of mechanisms that increase intangible capital at the state level. Intangible capital can be thought of as the sum of a country's intangible assets (Chen, 2018).

The Authenticity of a Traditional Ethnic Brand in Jewellery

Global enterprises face both an economic opportunity and a difficulty in the modern technological era. Due to a shortage of clients, there is an abundance of items and competitors. Customers are kings in this situation because they have access to a plethora of information and options. As a result of the proliferation of information and technology, market competition has become more dynamic and complex (Cavusoglu et al., 2007). In this case, clients are provided a wide range of options for a commodity that are virtually equivalent in price and quality. A company's name is one way to distinguish itself from the competition in the generic market. Customers use their purchasing decisions to assess the quality of a brand. To survive in today's competitive market, all organizations have been obliged to recognize the need of optimizing their assets. To achieve this condition, a single investment is required. Meeting a customer's wants is no longer sufficient; hence, brands are vital (Teece, 1998).

A brand is different from a reputation or a trademark. While marketing activities are more directly related with a brand than with a trademark, the latter has a stronger legal component. A brand is also described as the name, word, mark, or design, or any combination thereof, that identifies the creator or seller of a product or service, as well as favourable customer knowledge of the brand and the beneficial effects of using the brand, both of which communicate brand equity (von Graevenitz, 2009). A brand is much more than just a distinctive logo or concept. They aid in identifying and distinguishing their products and services from those of competitors, and they are essential in forming effective partnerships with a diverse range of stakeholders, giving firms a competitive advantage. The luxury goods industry is becoming more competitive and profitable.

To improve customer demand reactions, luxury companies need to obtain a deeper understanding of what is going through their customers' minds, whereas food and beverage labels may strive to enhance sales. Luxury goods manufacturers are obligated to make their products of the highest possible quality, to sell them at competitive prices, and to collaborate with well-known public figures so that customers of any social standing who place symbolic or emotional importance on their purchases can take pleasure in them (Walls et al., 2011). Because premium brands are more noticeable when worn, they have the potential to elevate the social status of the individual who wears them. Luxury goods are products that the owner of the good can use to enhance their status. Examples of luxury goods include watches, jewelry, handbags, shoes, and accessories.
For a long time, the concept of resilience has been related to an organization's prestige or brand identity. Organizations perceived as more sustainable or responsible will frequently demand higher pricing, and supply chain sustainability issues pose a danger to the chain’s brand or reputation. From the standpoint of a business, sustainability may be defined as an organizational strategy that emphasizes reducing the quantity of resources consumed and making effective use of waste generated (Hrebiniak & Joyce, 1985). This is done to reduce the negative effects of the company's actions on humanity. Policies and programs that promote sustainability, in general, strive to support sustainable development in such a way that behaviours meet current demands without jeopardizing future generations' ability to meet their own.

Material and Method

The study was carried out using qualitative methodologies. The data was collected in two stages: To begin digital mapping, samples are collected from the Indonesian towns of Yogyakarta and Denpasar, as well as the islands of Java and Bali, which have historically produced ethnic jewelry. In addition to random questionnaires in the first phase, big data harvesting, product samples, and interview techniques are used in the second phase. The Butterfly Mamoli technique was employed for the study, which is based on studies on the roles of the left brain (logical) and the right brain (emotional) in humans, as seen in figure 1.

**Figure 1 The Butterfly Mamoli Diagram in the Study of Historical Sites**

![Butterfly Mamoli Diagram](source: Nursanty, 2019)

Result and Discussion

According to the study's conclusions, cultural institutions' use of digital technologies benefits tourism destination management. This is especially true when it comes to reaching new audiences and improving the visiting experience. This is accomplished by distributing high-quality, authenticated digital content that may be accessed online or deployed on-site. It is possible that such methods, in addition to providing new ways to involve the public in historical study, will now serve as a new type of money in a new experiential sector of the global digital economy. This opportunity exists because such methodologies may provide new opportunities to involve the public in historical inquiry.

Tourism development is strongly based on cultural legacy, and internet tools can be utilized to expand the worldwide reach of cultural assets and narratives. Furthermore, these tools can
be utilized to give increasingly localized stimuli for in-destination visits to historical sites, as well as the use of digital technology to exhibit components of intangible heritage.

Traditional Indonesian jewellery is one of several cultural artifacts that are still practiced today, along with dance and regional language. Traditional jewellery differs from one region of Indonesia to the next in the same manner that traditional clothing does. This style of jewellery is typically used during traditional ceremonies or weddings (Carpenter & Heurtault, 2011). This is one of the records of Indonesian culture that should not be lost, and we can see our ancestors' metallurgy skills through the traditional jewellery they wore. According to historical accounts, the ability of the people who are now known as Indonesians to manufacture metal can be traced back to as early as 1000 BCE.

All the way through the Dong-Song Bronze Age, in particular. When Chinese and Indian influences first arrived in the archipelago around 500 B.C., the metal crafts that were the forerunners of jewellery began to experience considerable changes in appearance. Each region of Indonesia has its own distinct culture. Traditional rites, such as wedding ceremonies, are an example of cultural practices that are still practiced today. At this celebration, traditional clothing, and accessories, such as jewellery, are worn (Cohen, 2016).

Besides being worn for aesthetic purposes, this jewelry is often the focal point of ritualistic ceremonies, partly because the bulk of these classic jewelry items are treasured heirlooms. Jewelry passed down through generations is often associated with long-standing cultural practices that have maintained their significance in modern Indonesia. This is since jewelry is something that is always passed down from one generation to the next (Manning, 2000). A Surakarta-based expert shared that jewelry serves as a status signal and is only worn to events when a deeply held religion is celebrated and respected. Marriage, the end of adolescence, the birth of a child, and the introduction of any new member to the family are all instances of such milestones. This is because traditional jewelry craftsman canters are spread out across the entirety of Indonesia, as shown in Figure 2.

**Figure 2** Digital Map illustrates the connection between heritage, location, and cultural goods


Furthermore, in complement to being worn as an accessory at traditional events with cheerful components, ethnic jewellery is also worn during significant occasions and is sombre, especially when worn during events with a tense atmosphere, such as war. This is because...
ethnic jewellery is regarded as a symbol of the wearer's dedication to a cause. According to one of the families in Surakarta that produce “keris” and necklaces for a living, there is a common idea that traditional jewellery serves not only as a decoration but also as a "medium" that bestows mystical power on its wearer during this ceremony. This is a clearly stated conviction. Ethnic jewellery is not simply worn for decoration; it has also historically served as an amulet or as an additional source of spiritual support for the culture to which it belongs.

Figure 3 Diagram connecting heritage jewelry and economic commodities

Source: Prastyadewi, 2022

Figure 3 illustrates the evolution of traditional jewellery over time. It is no longer a unique spiritual thing but rather a commercial product. This is altered by the changing behaviour of people over time. Originally, the term "place" referred to a location where a group of people assembled. Currently, the term is used to describe places with an emotional link to a person, even if that person is no longer present or has changed. The worth of the product is no longer solely determined by a material's rarity, uniqueness, and durability. In addition, it is influenced by new technology and other novel and singular variables. In a same manner, the current meaning has developed through both tradition and ritual, which are always displayed to everyone, including tourists.

The tangible artifacts and intangible traits of a group or culture that have been passed down through the years, preserved in the present, and passed on to the next generation make up what is known as cultural heritage. Cultural heritage includes things like structures, monuments, landscapes, books, artworks, and artifacts. Also included are the oral traditions, performing arts, social practices, rituals, celebratory events, knowledge, and practices concerning nature and the universe, and the skills necessary to manufacture traditional crafts that have been passed down from our ancestors and on to our descendants (Hayden, 1997).

These artifacts, in whatever form they take, are component of our legacy, and preserving them needs our active participation. They may be significant because of their economic worth, but they may also be significant because they make us feel a certain way or make us feel like we belong to something, such as a country, a tradition, or a way of life. The most effective way to maintain your cultural inheritance, no matter what it is, is to share it. It is vital to maintain our cultural legacy since it contributes to the preservation of our national identity. The value of intangible cultural legacy lies not in the cultural manifestation itself, but in the abundance of skills and information that it transmits from generation to generation.

The Economic Values Of Cultural Heritage: A Case Study In Bali, Indonesia

As one of the tourist areas which is also the main tourist destination in Indonesia, Bali does not only rely on natural resources but also cultural values that are inherited from their ancestors. Various tourist sites in Bali will always have a relationship with cultural values as an ancestral heritage where each cultural heritage is, at the same time, a source of economic
development for the community and regional economic growth. One example is Subak Jatiluwih, located in Jatiluwih Village, Tabanan Regency.

Jatiluwih Village, with the potential for natural beauty, panoramic views of terraced rice fields or terraces and the cool air of the area with an altitude of 700 meters above sea level, has become one of the tourist destinations in the world and is included in the United Nation Educational, Scientific and Culture (UNESCO) World Heritage list as world cultural heritage. The uniqueness of terraced rice fields or terraces is also supported by a traditional irrigation system, namely subak with the Yeh Aya Hulu Dam as a dam to regulate the water flow in the rice fields separates tourist attractions. The concept of environmental preservation that adheres to Tri Hita Karana makes Jatiluwih Village a tourist village that maintains environmental balance (Prastyadewi et al., 2020).

The way of processing agricultural land is still traditional by using cows or buffalo to plow the fields and traditional plow tools. Likewise, harvesting is traditionally done using ani-ani as the primary means. Planting and harvesting in land management still use the mutual cooperation pattern. After harvesting is done, it will be tied traditionally, which has its own peculiarities and is not easy for everyone to do because women farmers generally carry out harvesting traditions. After drying, they will be transported to their respective homes to be stored in a barn for a certain period of time.

The cultural uniqueness of rice cultivation and harvesting, landscapes with the traditional Subak irrigation system, and temples in Jatiluwih Village have now become a unified tourist destination that creates economic resources for the community. Status as a world cultural heritage area also provides benefits for farmers in the form of cutting tax obligations. The village-managed financial management system divides the amount of income from tourist areas and frees farmers from payment obligations for religious ceremonial activities. These points make a cultural heritage a valuable economic asset if it can be adequately managed.

**Culture and the Future Economic Value**

Culture plays an important role in the economic development of a nation. The way people of a nation see their government, their jobs, their relationship with family and relatives and other people around them are what the culture refers to. So how a man ends up being is not determined by nature but by culture. By how a person is being raised, his habits, his education, and his customs. Therefore, the better culture a nation has the better its economy it has.

When used by economists, the term "culture" refers to people's views and values. Culture can refer to a variety of things, such as diverse culinary preferences and odd practices. It covers the society they were reared in and the worldview their parents instilled in them. Studies looking at how parents and their kids behave have revealed that attributes like saving, trust, patience, and a risk-taking attitude are frequently passed down through the generations. Like this, cultural values are passed down from one generation to the next. Many of these ideals will influence behavior, which will impact the economy.

We have seen evidence thus far that culture differentiates, is largely inherited, and is important in explaining individual behavior. However, how does culture assist us in comprehending why some nations have developed economies and others do not?
So how should we consider culture while assessing economic development? The flowchart below was taken from Guilino, it gives clearer picture of how culture relates to economic development.

**Figure 4 Diagram economics of politics by Guiliano**

Paola Giuliano and Alberto Alesina states:

> The same institutions may function differently in different cultures, but culture may evolve in differing ways depending on the type of institutions. (Alesina & Giuliano, 2015)

From the quotation above, it can be concluded that even though the same institutions may function differently in many civilizations, culture can develop in a variety of ways depending on the institutions.

Cultural identity and personal preferences are typically used in economic research as exogenous fixed factors on which to base studies and reach conclusions. The premise behind other social sciences, such as anthropology, sociology, and psychology, is that culture and personal preference may change through time and be impacted by their circumstances. Economy and culture interact with one another.

**Conclusion**

The cultural and ecological histories of a country are unique and extremely valuable. It's a means of displaying your personality to the rest of the world. Cultural heritage is a vital aspect of who we are as a people because it establishes a framework for preserving cultural and historical places, old buildings, monuments, shrines, and landmarks. A group's values, beliefs, and ambitions define their national identity, which is shaped by their culture and history. It is critical to preserve our cultural history because it allows us to remain loyal to who we are as a group. The importance of intangible cultural heritage comes not in the cultural artifact itself, but in the wealth of knowledge and skills it passes down from generation to generation. This information flow has enormous social and economic implications for both minority and majority communities inside a country. It is also critical for both developing and established countries.

This digital legacy's importance and extent will only grow in the future. The use of digital technologies to record and share what people value and want to pass down to future generations is growing. New means of expression and communication have emerged that were previously unknown. The expanse of the Internet exemplifies this phenomenon. Further rapid growth in digital heritage in regions of the world currently disadvantaged by the prevalence of English on the Internet is likely to be aided by the development of tools to promote larger multilingual and multi-script Internet usage. As a result, the preservation of the world's expanding digital legacy is a global issue affecting all governments and people.
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**Transcultural Languages: 3D Reconstruction of the Wampo Canoe, and Its Interpretation Through Intelligent Technologies on Digital Fabrication**

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**Abstract**

The heritage rescue promoted since 2003 by Unesco in its convention for the safeguarding of the Intangible Cultural Heritage is the foundational basis of our research group, which focuses on the generation of new cultural expressions with the integration of state-of-the-art intelligent technologies. Our objective is to rescue, transcribe/translate and create new expressions based on cultural based raw material and elements. Housed as a project exercise of the Innovation and Territory Laboratory of the Design Department of the Catholic University of Temuco, this work proposes to explore new cultural/artistic experiences. For this purpose, we have identified and selected symbolic elements of the native peoples that inhabited the current Chilean territory, specifically the Mapuche nation, located in Araucanía region. In this case we do a photogrammetry process of one of this canoes and start to thinking about its re-construction with new methods of fabrication, and also propose new materials for the speculative propose. At the end of this work we can offer a several approximations of a new ways of reconstruction, not necessary based on functional approach, but also in a perspective of give some point of discussion about the new technologies and its ethical role.

Keywords: Digital Humanities, Inmaterial Cultural Hertitatge, Mapuche, Lafkenche, Wampo
Introduction

From the Laboratory of Innovation and Territory housed in the Department of Design of the Catholic University of Temuco we have been proposed to perform the crossing between emerging technologies and the registry material of the native peoples who inhabited the current Chilean territory, all with the primary purpose of giving value to the native peoples and ancestral practices, in a sufficiently broad scope from which we can observe and promote correct and restorative eco-social practices [5]. It is under this premise that the FAAD Research Group is currently being developed, a research group open to the faculty, from which we will broaden the spectrum of the proposed research to the arts and architecture.

The pre-Hispanic native peoples that developed on the current Chilean geography moved freely through the territory[1], a territory of abrupt morphology, configured by the Andes mountain as a physical-perceptual limit to the east, and from which are born a significant number of rivers that cross the geography, from its highest elevation, tributaries fed by winter ice, which after the spring thaw flow to the lowest elevation in the west where they flow into the Pacific Ocean, a place where freshwater mixes with salt water.

These native peoples made a conscious reading of the territory, identifying places of passage in the mountain chain where the Mapuche people traveled to the Atlantic Ocean in search of salt, these trips were made at very specific times of the year in which these mountain passes could be crossed. In this drift they also exchanged raw materials and objects such as functional handicrafts with other Mapuche settlements that they encountered on their passage through the territory [44].

The Mapuche people focus their spiritual world around the elements that make up nature, and in this spiritual world they build an arboreal imaginary where they identify some species that make up their spiritual geographic repertoire.

Likewise, this native Mapuche people integrates in their daily actions the consideration of the natural world, this is reflected in daily activities of consideration of the earth and its natural elements. We have witnessed firsthand how the Mapuche communities begin their ceremonial acts by sharing food and drink first with the earth, giving thanks for these and the abundance provided by the soil [37]. In this aspect Hilger [19] highlights how Mapuche children were sent to talk with the soil, the earth, the trees and the animals, in this sort of consideration and horizontality among all of us who are standing on the earth, forming a primordial and necessary part of this interconnected and hyper-influenced ecosystem configuration.

In the shamanic rituals, the Mapuche culture reconnects the local ecology with its ceremonial ritual elements and processes, intertwining its diverse territories or spiritual platforms [16] with man and nature -Kimün-, in some of them interpreting the trajectories of birds, imitating their logic of displacement [17] in a surrealist game of activation of the cosmos. All these elements construct the symbolic space of the Mapuche sacred geographic landscape [35], which is evident in their ceremonial rituals.

However, in the southern part of the current Chilean territory there was a significant number of native peoples who designed and built canoes as a means of river transport in both fresh and salt water, of which a significant number of these canoes are still found mainly in European museums [42].
Among them we mention here the Mapuche Lafkenches [36] who occupied the current area of Biobío, Araucanía and the Lakes, as well as the Fuegians in the extreme southern part of the territory, the land of fire, being the Yaganes, Onas, Kaweskar, Alacalufes and Selk'nam [30].

For this specific work we have taken as a reference the Mapuche Lafkenches and their canoe -wampo- monoxilo [11].

This Mapuche canoe -wampo- is an element that can, eventually, respond to two different situations between them, but that nevertheless, conceptually possess a common thread, this common thread is the drift or the journey. This is how the -wampo- can certainly be used to be transported on fresh water, at the same time that it can be the funeral urn that transports the body in this change of states in the direction of the -wenumapu-[13]. Also important is the spiritual consideration of water for the Mapuche culture, water as a transforming element of nature, water as a basic element for human life on which we all depend and which is certainly not an inalienable element or transferable as a consumer good [32], but rather as an element that is part of life [38].

The rehue (sacred place) is composed of various plants such as maqui (Aristotelia chilensis), canelo (Drymis wintleri), quila (Chusquea quila), apple tree (Pyrus malus) and ampe fern (Lophosoria quadripinnata). In the middle of these branches a stick with steps is placed (the rehue strictly speaking) so that the machis can be enraptured in it. They dig a hole, throw in pesos and silver beans and plant the rehue (stick) on these coins (Pascual Coña, Moesbach, 1930, p. 342) [27].

The tree possesses a whole spiritual significance [31][34] for the Mapuche as a configuring element of their -kimün- and their -newen-, among the identified species that possess a high symbolic significance we find the maqui, the laurel, the eucalyptus, the cinnamon tree and the oak. The latter is used in the construction of the -chemamüll- [33], the -rewé- and the -wampo-, all these elements concentrate the energies they symbolize [18]. The oak (Nothofagus oblicua) is characterized by its stages of growth and evolution, also receiving different names in Mapudungun for each stage, so the young oak is called -coyan-, -coyam- or -hualle- and the mature oak is called -pellin-. In their spiritual dimension, some of them are characteristic for their sensorial participation in the daily living, and others are characteristic used in a discursive and ritual dimension [31]. Thus also the oak specifically is used also in the construction of musical instruments Pifilka, louse and the bark for the dyeing of wool [22].

**Context**

Forests and wood play a fundamental and essential role in Mapuche culture. They consider the tree as a symbolic element endowed with a spirit -Ngen-[4][14], as well as a functional element that, as a last resource, serves to heat the house in the form of firewood. The Mapuche concept -itrofil mongen- supports a naturalistic conservationist view of the territory and its abundance. In its functional role it forms part of the construction of elements of diverse scales, furniture, architectural structural elements as well as the symbolic role in the construction of the -rewé-, the -chemamüll- [47] and the -wampo-. This is how we have witnessed the deforestation of native forests at the hands of the forestry industry[20], this industry currently has a negative ecological impact not only on the soil, but also on the immediate surroundings, as well as the consumption of water from the mountain tributaries.
The effect of monocultures and pest control to improve forest production using chemicals has generated such a magnitude of deterioration of the ecosystem [28], eliminating complete links in the food chain, insects, earthworms that are the food of birds and other animals in danger of extinction [3][23][28], modifying and deteriorating this Mapuche spiritual geography, the same effects of the deterioration produced by global warming with its most immediate effect climate change [9], which is modifying and favoring the displacement of tree species and soil use, drying wetlands with the advance of desertification [39].

The Mapuche peoples define the hydrographic basins as the delimitation of territorial occupation [40], considering fluvial transport through these canoes -wampo- of the native peoples, mainly for the crossing of people over the rivers [10][46]. According to Lira, these vessels were used in different navigability contexts, and the different shapes of the monoxila canoes developed were verified in these contexts [41]. It is also interesting to note that these navigation techniques were already well established prior to the invasion and domination of Araucania [6] by European plunderers.

La otra embarcación muy usada en este reyno es de canoas: derriban un árbol grueso y alto, devastan el tronco o plan que ha de servir de quilla, caban el corazón hasta dexar el plan de cuatro dedos de grueso y los costados poco más de dos, y acomodan el güeço para buque, la extremidad más delgada para proa, y la mas gruesa para popa, donde se asienta el que gobierna con una pala que llaman canalete, y quando es grande sirven otros dos de remeros a los lados y reman en pié sin estribar en el bordo de la canoa, con que la trahen tan ligera que apenas toca al agua. Pero como son redondas son celosas y suelen trastornarse. Son moderadas, y la mayor que he visto fué en Tolten, capaz de treinta personas[...].

No son en Chile los árboles tan gruesos, ni tienen los indios instrumentos con que labrar los palos que no alcanzan, sino un toqui o una azuelilla del tamaño de un formon que la encaban como martillo, y con su flema van cabando un arbol grueso, gastando mucha chica en tres tiempos, uno al cortar el arbol, otro al desvástarle y otro al concabarle, y otro gasto y fiesata al echarla al agua. Y antes que tubiessen instrumentos de ierro, y los que oy no los tienen en las provincias cercanas al Estrecho de Magallanes, hazen las canoas con gran trabaxo y caban un arbol muy grueso con fuego, y con unas conchas del mar le van raiendo, aplicando el fuego moderadamente al rededor del arbol, atendiendo a que no gaste sino aquella parte necesaria para derribirle, y con lentas llamases le trozen, sucediendo las conchas, que ni tienen mas achas ni azuelas para descortezarle, pulirle y darle la perfeccion. Y con el mismo trabaxo y faltas de erramientas abren el buque, quemando a pausas el corazan del arbol y raspando con las conchas lo que labra el fuego; y aunque tarde y espaciosamente, vienen a sacar su embarcacion tan bien labrada como si tubieran los instrumentos necesarios; y hazen mas que nuestros artifices, pues sin instrumentos obran a fuerza de industria y de paciencia lo que ellos con ayuda de azerados instrumentos. Tan ingeniosa es la necesidad y la naturaleza en los mas rusticos para su conservacion, como en los mas politicos el arte.

Con estas, aunque debiles canoas, se arroxan al mar a pescar, como lo hazen los de la Imperial en la pesca de las corbinas, que es muy copiosa, y tambien a dar asalto a los enemigos, como lo hizieron en la punta de la Galera, que navegando por el mar en silencio de la noche con diez canoas, salieron a la mar por el rio de Chaguín y desembocaron en las tierras de sotabento del puerto de Valdivia a moloquear a los
indios amigos de los españoles; pero sentidos de ellos fueron rechazados, y después de una gran batalla en que quedaron muertos muchos indios, los demás dexaron sus canoas y se echaron al monte, que es allí muy espeso, y de palos secos hizieron balsas y se volvieron a sus tierras (1877) [29].

Likewise, in order to give context to the above, it seems relevant to us the testimony of Mr. Guillermo Reucán, which we present below:

About its use, my grandfather had a canoe here, because he used to drive it in the lowlands there, on the other side in Tralahuapi, down here, on the beach that goes down to the edge of the road, there was the port. And there they would go out in canoes, they would go to Tralahuapi, to the other side, Curihue, all that. When there were emergencies [...] when a family member died, the telephones they had were the smoke. They had a part where they could build a fire and make smoke. The others on the other side, when they saw the smoke, they would go over here to see what was going on (it took them two hours, sometimes a little more [...] they were heavy, for the rowing, for everything. Because they were not well built, and they were thick. They were four, five inches thick. But the waves didn't move them [...] They made some dowels so that the paddle would hold there [...] Well, here they had a canoe that weighed about five hundred kilos [15].

To summarize, we would like to establish this context in which this work is developed, a complex context configured by an original cultural heritage with its symbolic, territorial and also functional considerations. An original cultural heritage of great value and that through various approaches we put in value through new interpretations, initially digital, which will later become material.

Methodology

In this section we will describe the methodology described to address the issues previously discussed.
Figure 1 corresponds to the general graphic that defines our methodological approach based on prototypes, from which, rather than posing a question, we propose digital processes, which after several iterations, we obtain findings that facilitate the formulation of the research question. This iterative process is less conceptual and reflexive, and is based on experimentation as a search process. Certainly here our methodology based on doing sets us apart from traditional methodologies based on scientific research, and brings us closer to the development of both digital and physical prototypes.

In figure 2 we present the methodological graph through which we approach the experimental development of prototypes with input data coming from functional crafts, classification that corresponds to our current object of study: the Mapuche -wampo-. In it the work begins with the identification of the material corresponding to the intangible cultural heritage, its classification, the role that this has fulfilled culturally in its original pre-Hispanic environment, mainly, to define our ethical role after this bibliographical review, with respect to our performance. After these previous steps, we point out the process through which we will carry out the digitization of the element, in this case the Mapuche -wampo-. For this particular case we have used photogrammetry with the free software Meshroom [2]. This exercise was proposed within the Design workshop of the third semester of the design career of our university. In this particular case, students David Bustamante and Pablo Sandoval were responsible for making the various photographic sweeps of the element and compile the photographic information that then served as the basis for the development of the prototype. The students' work resulted in a digitally reconstructed assembly of the -wampo-, which through an augmented reality application was represented on the lagoon of our campus.
Although the work of the students could be exposed in the results, we present it here because it is a derivative of our research methodology based on prototypes, with a clear output of application and dissemination, but for the particular case of this work we prefer not to deepen.
Well, for our work we have used the three-dimensional mesh obtained from this photogrammetric process and from this we have made several digital processes for its recomposition and volumetric re-interpretation, which gives us the opportunity to rethink some manufacturing processes.

**Discussion**

We start the digital prototyping process from the mesh provided by the photogrammetric survey. The first process we perform is the adaptive remeshing from the original. This process of adaptive remeshing allows us to establish a better distribution of the points that determine the definition of the three-dimensional mesh, in this we have defined some values with respect to the original definition, among them we determine the maximum and minimum distance between the new points and the variability that the remeshing process can offer us, This value is relevant because the original field has flat areas, in which the defined points of the mesh can be at a greater distance, and also because of its manual construction, it has areas of greater curvature in which it is necessary to concentrate the points that define the mesh.

![Figure 6: Grasshopper definition, remeshing process, rebuild process Mesh-Surface-Mesh. By the authors.](image)

The initial mesh is the result obtained from the photogrammetry, to obtain this more than 40 photographs of the object were taken, images that have been shared as a repository in our research group FAAD.

![Figure 7: Initial mesh.](image)
Figure 8: First result from the simplified mesh reduced.

In this process we remove polygons randomly to obtain an adequate amount of points and meshes, this adequate amount is also determined by the amount of data that the hardware is able to compute, so the polygon drop directly affects the computational speed that the hardware is able to offer. We then explode the mesh, extract the points and reconstruct the mesh from these points in a process that simplifies the result.

Figure 9: Explode and reconstructed mesh-surface-mesh.

Result of the explosion of the mesh previously reduced and reconstructed on the basis of surfaces.

Figure 10: Last remeshing adaptive process. Grasshopper[12] & Meshmachine[26].

In Figure 10 we perform the last remeshing, this time an adaptive remeshing that allows us to control the disposition of the points that define the final mesh.
Figure 11: Last result from the adaptive curvature remesh.

Last result of the adaptive remeshing, in this one we verify the separation of points in the flat areas and the accumulation of points for a better definition of the curved areas.

Figure 12: Applying different topological models using Grasshopper[12] & Weaverbird[43].

After the previous steps of optimization of the original mesh, which have been necessary to provide geometric control, we are able to apply topological modifiers which after several processes transform the original mesh into a volume that defines an interior and an exterior, minimum conditions to move to a CAM computerized manufacturing process.

Findings/Results

An unexplored gap for new interpretations of intangible cultural heritage is the proposal of computer-assisted manufacturing processes, these processes should be adapted in terms of materiality and constructive process proposing new discursive and recursive resources in these processes based on the generation of prototypes as a tool for experimental research [24]. At this moment, and based on these results, we are in the definition of the productive processes that we will integrate for this purpose [7] [8] [21]. The validation of this methodology that links the analog world with the digital world, opening the geometric paradigm of the reproducibility of the works in question, seems to us to be relevant.

On the other hand, the models trained in artificial intelligence also offer us the realization of learning with respect to the analogous processes of traditional manufacture, so we could think of training a model in the traditional way of the manufacture of canoes -wampo- mapuche.
Each of the results proposed by the programming and geometric algorithms solved by the topological modifier offers several areas of customization, openness and other elements.

The analysis of these geometrical results thus guides the future development of a geometry adaptable to analogous manufacturing processes for these geometries.
Conclusions

Digital platforms and AI models enable us to build a new computer language of the elements of the functional crafts elements of native peoples, which enables us to use this material for new evolutionary constructions that evolve over time. A new constructive approach also brings with it new tools and possible materialities [25][45], which proposes a research field of interest for our FAAD research group.

With respect to digital humanities, we can at least verify that this work correctly performs an educational task of dissemination of the intangible cultural heritage of the native peoples of the current Chilean territory. This revisit to these elements brings with it new challenges that evolve with technologies, as part of this work we find relevant the descent made by our students regarding the proposed methodology, who finally will be responsible for the recovery and enhancement of these elements, which build our local identity, and that through these project exercises are revitalized and configured raw material rich in meanings.

We would like to stay with some aspects that flutter our development:

1) To redefine these ethical aspects and how they influence the proposed methodology.
2) Prototype these new proposals for the reconstruction of functional crafts elements.
3) Analyze these new elements with a whole new way of perspective.

Acknowledgements

We thank here the deanship of our faculty, for offering the necessary spaces so that this drift, which links intangible cultural heritage and new technologies, has a space from which to plant a seed that we believe will germinate to the extent that each of these proposed perspectives have, certainly, its descent to the undergraduate.

Here we also acknowledge the space provided by the Department of Design of the UC Temuco, who constantly supports these instances of participation in conferences and journals. Likewise, we would like to thank the Research and Innovation Department of UC Temuco for its support, necessary for the confirmation of participation in this congress.
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“Nandopananda”- Process of Performance Rehearsal for the Creation of Contemporary Performing Arts

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Abstract
Nanthopananthasuttra Kham Luang is Buddhist literature that Prince Thammathibet Chaiyachet Suriyawong wrote in 1736 B.E. from the Nanthopanathapakorn scripture that Phra Buddhasiri originally composed in Pali. It is considered one of the valuable pieces of literature of the Ayuthaya period that represents the poetic genius of Prince Thammathibet, the writer who had composed this piece of writing by blending multiple languages, including Thai, Pali, Sanskrit, and Khmer, into a descriptive Rai Boran or ancient verses. This ‘Samud Thai’ Book was listed as Thailand’s documentary heritage on the Memory of the World Project by the United Nations Educational, Scientific and Cultural Organization (UNESCO) in 2015. Nanthopananthasuttra Kham Luang is an intangible cultural heritage that reflects a unique national identity and pride that has long been inherited from the ancient civilisation.

Inspired by Nanthopananthasuttra Kham Luang, “Nandopananda” has been transformed into a contemporary performing art and lived on stage on February 11, 2022, at Songpol Theatre, Silpakorn University. The creative research methodology as practice as research (PaR), conducts innovative performing arts knowledge through practicing and sharing the performing arts knowledge systemically. Its could build and define performing arts techniques from practice to communicate to the audience. The achievement that came from the creativity of this one-piece performing art had been obtained from the synthesis of knowledge using various acting techniques that were cultivated from the rehearsal process.

Keywords: Nandopananda, Performing Arts, Rehearsal
Introduction

Listed as Thailand’s documentary heritage on the Memory of the World Project by the United Nations Educational, Scientific and Cultural Organization (UNESCO) in 2015, the ‘Samud Thai’ Book of Nanthopananthasutta Kham Luang written by Prince Thammathibet Chaiyachet Suriyawong is Buddhist literature that describes the story of Phraya Nandopananda Nagaraja, the Serpent King who failed to discern right from wrong. The Lord Buddha, therefore, assigned Phra Maha Moggallana, one of his closest disciples, to change the Serpent King’s false belief. Eventually, Nandopananda Nagaraja accepted to believe in Buddhism.

This creation of contemporary performing art, “Nandopananda” had set a conceptual framework through the documentation collecting process and the literature review by maintaining the storyline as appears in the original version of Nanthopananthasutta Kham Luang and using various symbols through theatrical elements to present the theme of the story to various groups of the target audience. For instance, the lotus symbolized Buddhism, the white fabric symbolized the Nagaraja, and the paper symbolized smoke.

This performing art was scheduled to live on stage on February 11, 2022, at The Songphol Theatre, Silpakorn University. Due to the COVID-19 pandemic, the theatre had been limited to 30 seats for registered persons only. However, the general audience could enjoy the show via the Facebook LIVE of the Faculty of Arts, Silpakorn University.

Creative research methodology

“Nandopananda” is a surreal and symbolic contemporary theatre presented through a combination of aerobics and outside - in acting techniques to merge with concordant theatrical elements, such as plot, character, characterization, thought, diction, and song.

In addition, various techniques were utilized in the process of directing and rehearsing, as follows:

Physical training techniques

1. Breathing technique
   Breathing is considered the most important foundation of acting. The rhythm of the breath (slow-fast) can affect or lead to different emotions.

   Actors must be aware of their breathing rhythm. They should be able to breathe naturally and control the rhythm of their breath and movements that are consistent with their own breath.

2. Direction technique
   The breath helps direct the movement to the left, right, front, or back.

   So, performers can determine the movement by imaginary lines, such as a straight, a curve, a triangle, or a square, through a single exhalation.
3. Focusing technique
   Actors can designate a focal point as their lead point so that the audience can understand the behavior or acting, the dialogue, the distance, and the area dimension.

4. Weight technique
   The basic technique for weight determination is to imagine the actor’s body as water that will move him to various points which will cause various feelings.

5. Speed technique
   The setting of speed can create different meanings. For example, the pace of speaking and the pace of movement will lead to different feelings and emotions that will be conveyed to the audience.

6. Center technique
   Positioning of the actor’s all body parts, including left, right, front, and back, and the use of centralizing and decentralizing techniques when walking or moving will cause a weight transfer that creates a specific meaning for each character.

7. Balance technique
   The setting of body balance, the way to get out of balance, and maintaining the balance will lead to stability of body movement.

8. Level technique
   The different levels of the body affect the stage appearance and the interpretation of the audience. There are five significant body levels, (1) lying (2) sitting on the floor (3) squatting (4) standing (5) jumping.

Voice technique

The use of voice is essential for performers. So, they need voice training including the use of oral muscle (tongue and mouth warm-up), the use of facial muscle (facial contracting and expansion), and the use of body gestures together with voices in order to convey messages to the audience.

The voice exercises include:

(1) The practice of pronunciation of each consonant and each word same as the music scale
(2) The practice of mouth shaping for more clearly pronunciation
(3) The mouth exercises

Clear pronunciation can indicate the meaning of a word in each language without any gestures. It will help the word become more powerful and meaningful.

Result and Conclusion

Inspired by Nanthopananthesutta Kham Luang, Buddhist literature written by Prince Thammathibet Chaiyachet Suriyawong in 1736 B.E. from the original Pali scripture, Nanthopanathapakorn, by Phra Buddhasiri, Nandopananda had been recreated into another form as a contemporary performing art and successfully achieved the objectives as follows:
1. One creation of “Nandopananda” Contemporary Performing Art

![QR Code for the Contemporary Performing Art: Nandopananda](image)

*Figure 1: QR Code for the Contemporary Performing Art: Nandopananda (From: Dr. Pawarin Mina, 2022)*

2. The synthesis of knowledge for producing art creation through an academic article titled “Nandopananda - Process of Performance Rehearsal for The Creation of Contemporary Performing Arts”

![Thai Buddhist Literature; Nanthopananthasutta Kham Luang](image)

*Figure 2: Thai Buddhist Literature; Nanthopananthasutta Kham Luang (From: MR. Gan Phittayakornsilp, 2022)*
Figure 3: The fighting between Nandopananda and Maha Moggallana

(From: MR.Gan Phittayakornsilp, 2022)
However, the creative researcher has a suggestion to develop, and continue the creation of “Nandopananda” - The Contemporary Performing Arts at the next international level in other countries to synthesize the result in conveying the message/theme to the audience and to expand more knowledge.
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Digital Technologies in Teacher Education With Reference to French Language Teacher

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Abstract
This paper examines digital technologies in teacher education with reference to French language teacher. The purpose was to find whether digital technologies can be used by teachers to teach French language. First, there is need for the education sector to adopt digital technologies to teach in the classrooms. Secondly, it has been observed that learning of any foreign language require the use of language laboratory well equipped with all the technology tools such as computers, radio, television etc. and perhaps digital technology could play a vital role in teaching and learning French language. Secondary data was used to gather information for the study, through in-depth review of journals, articles, textbooks and research materials offline and online in search of how digital technologies can be used by French teachers to enhance the learning and teaching of French language. In-depth studies of researchers on the use of digital technologies by both teachers and students reveals that it allows students to be much better prepared for class, and provides teachers with attractive resources to make their classes much more human and sociable, where all students have the opportunity to participate regardless of their level. Based on this, it is recommended that teachers and students should acquire efficient knowledge and skills on how to make use of digital technologies for teaching and learning. Teachers and students should be provided with the necessary tools and equipments required for the achievement of the goals by relevant authority.

Keywords: Digital Technology, Teacher Education, French Language
Introduction

In this present world, the use of digital technologies has become very important and understanding as they are being seriously used by individuals in various sectors. Digital technologies create an impact upon what, why, where and how the individuals learn and who they learn from. The widespread use of digital technologies is in the form of computers, laptops, tablets, smart phones, mobile phones and so forth (Kapur, 2018). The primary objective of digital technology is to create a platform where people can connect with one another seamlessly. Today digital technology has transformed the way people communicate, work and learn in the society. People are linked to one another with the help of digital gadgets. We have several advantages of learning through digital technologies and at the same time have some disadvantages in education. According to (Digital Technology, 2015) cited by Kapur, 2018, “the digital challenges are real and prove to be impediments within the course of attainment of knowledge and information. Measures are required to be implemented to overcome the problems and challenges associated with digital technologies.” Digital learning is any type of learning that uses technology and it can happen across all curriculum learning areas including French language. In teaching and learning French language digital technologies can play a vital role. It has been observed that learning of any foreign language require the use of language laboratory well equipped with all the technology tools such as computers, radio, television, internet etc. This article aims to looking at the need for using digital technology in teacher education with special reference to French language. Also this study provides a general understanding of both teachers and students involvement in digital technologies as well as the effectiveness of French language teaching and learning with technologies.

What is teacher education?

Teacher education is a designed programme with the view of improving the teacher proficiency and competence that would enable and empower him to meet the requirements of the profession and face the challenges therein. According to Good in Dictionary of Education (1945), teacher education means, all the formal and non-formal activities and experiences that help to qualify a person to assume responsibilities of a member of the educational profession or to discharge his responsibilities more effectively.

Teacher education refers to the policies and procedures designed to equip prospective teachers with the knowledge, attitudes, behaviours and skills they require to perform their tasks effectively in the classroom, school and wider community. Although ideally it should be conceived of, and organised as, a seamless continuum, teacher education is often divided into these stages: initial teacher training/education; induction; teacher development or continuing professional development. There is a longstanding and ongoing debate about the most appropriate term to describe these activities. The term ‘teacher training’ seems to be losing ground, at least in the U.S., to ‘teacher education’ (Definitions.net, 2020).

According to UNESCO (2005), teacher education addresses environmental, social, and economic contexts to create locally relevant and culturally appropriate teacher education programmes for both pre-service and in-service teachers. Teacher education generally includes four elements: improving the general educational background of the trainee teachers; increasing their knowledge and understanding of the subjects they are to teach; pedagogy and understanding of children and learning; and the development of practical skills and competences. The balance between these four elements varies widely (Perraton, 2010).
French language and its status

French (le français or la langue française) is a Romance language of the Indo-European family. It descended from the Vulgar Latin of the Roman Empire, as did all Romance languages. French has evolved from Gallo-Romance, the spoken Latin in Gaul, and more specifically in Northern Gaul. Its closest relatives are the other langues d'oïl languages historically spoken in northern France and in southern Belgium, which French (Francien) has largely supplanted. A French-speaking person or nation may be referred to as "Francophone" in both English and French.

Adebayo (2019), points out that the French language is evolving, re-inventing itself, changing and becoming a multifaceted language, changing and adapting to modernity and cultural realities in the 21st century. According to Organisation Internationale de la Francophonie (2014) cited by Adebayo French language is said to be the 4th most used language on the internet, 3rd in business, 2nd in international information and the media, the 2nd working language of most international organisations and the 2nd most learned language in the world.

Suleiman (2017), affirms that the 21st century witnesses the ascendancy of French in academic writing and international research; hence, its importance for international researcher. French has become the language of not only science, computing, diplomacy, tourism, aviation but also research and academic writing.

Who is a French teacher?

A French teacher is someone who instructs students in French language skills and introduces them to French culture. Language teachers offer instruction to children in a variety of settings, but are most commonly found in middle school and high school settings. These teachers plan and deliver lessons, assign and assess practice work and evaluate student progress throughout the school year in French. Working with young learners who may be unmotivated or unruly can be demanding and tiring, but many find great rewards when they are able to observe the many milestones reached by their students.

French teacher has some roles or responsibilities that can assist him to achieve his goals. The primary role of the French teacher in a multidimensional language world is to put in place conditions and activities so that French students are able to practice French language in a meaningful way or context. It is one of the French teacher’s important responsibilities to build in students a positive attitude to learning French language either as a second language or foreign language. French teacher is also instrumental in creating a good and accommodative learning space within the classroom. With that students, who feel safe and confident are ready to learn the language. It is the French teacher who acts as facilitator, resource person and language model in the French classroom.

What are digital technologies?

Digital technologies are electronic tools, systems, devices and resources that generate store or process data. Examples of digital technologies include the following: social media, online games, multimedia and mobile phones. According to Darren (2009), the word digital comes from Latin digitus, finger and refers to one of the oldest tools for counting. When information is stored, transmitted or forwarded in digital format, it is converted into numbers at the most basic machine-level as zeroes and ones. In the context of this chapter, the term
represents technology that relies on the use of microprocessors; hence, computers and applications that are dependent on computers such as the Internet, as well as other devices such as video cameras, and mobile devices such as phones and personal-digital assistants (PDAs).

Digital technology includes all types of electronic equipment and applications that use information in the form of numeric code. This information is usually in binary code- that is, code that can be represented by strings of only two numeric characters. These characters are usually 0 and 1. Devices that process and use digital information include personal computers, calculators, automobiles, traffic light controllers, compact disc players, cellular telephones, communication satellites, and high-definition television sets (Invincible Web Solutions, 2019).

According to Kitchin and Dodge, (2011), so ubiquitously and insidiously are digital technologies permeating all aspects of life that some claim we now live and work in code/space. With this point of view we can now see that our life and work have been digitalised. For Fenwick and Edwards (2015), digital technologies and people are becoming interdependent, constituting one another, with emergent effects; they do not just mediate existing social forms, but are integral to practice.

Some Digital Technology Learning Tools for Classroom

Digital Technologies learning tools have become essential in carrying out daily learning activities. Research has made it possible for technology to be incorporated into classroom activities, in supporting group or individual learning. Digital technology can ameliorate the way students learn and as well as assist the teachers. According to Fenwick and Edwards (2015) where digital technologies are part of professional education, they tend to be treated as tools: useful to master, but clearly subordinate to the knowledgeable professional. Here are some major tools that can help teachers in enhancing learning in the classroom according to Modern Consumers (2017).

Electronic Whiteboards

Electronic whiteboards are very effective for group instructions. They are used for group presentations which enhance learning, and also students find it more compelling. Educators can use whiteboards to teach Languages, Social Studies, Sciences, and Mathematics. Electronic whiteboards are interactive such that, the teacher can project a diagram from a laptop onto the board and draw on it to help students understand quickly.

Desktops and Laptops

More teaching applications and classroom software are being introduced into the technology market. This drives the need for schools to get sophisticated computers with powerful processors to run the said applications. Classroom software helps in managing and storing of student records. Computers contribute to abolishing the need for bulky encyclopaedias and dictionaries as students can quickly look up information on the internet. Monitoring software can assist in gauging the level of understanding of students by; checking for their recall of Mathematics facts, quizzing their comprehension of a book, or by providing an interactive lab complete with a virtual dissection.
**Projectors**

In a large classroom, all students may not be able to view what the teaching is showing on the laptop screen, that’s where projectors come in. A projector hooks up to a laptop and projects the screen to a larger whiteboard in front of the classroom. It allows students, even those at the back, to see a larger version of the laptop screen.

**Videoconferencing Classroom Technologies**

Through video conferencing, students in different geographical locations can attend to a lecture through online streaming. Video conferences can be set up on Skype or Google Hangouts, and Guest Speakers can easily address the students. Video conferencing can help reduce travel costs and time required to give speeches at different places.

**Mobile Learning**

Mobile devices enable learners to take their classrooms anywhere. There are more education apps available already that students, as well as teachers, can use. By using mobile devices, iPads, tablets, or other devices, educators and learners can maintain a connected classroom experience.

**Television**

Televisions can show current events in a country like business news, presidential elections, etc. They can also be used to play educational and instructional DVDs or videos on the history of a certain community.

**Computer Networking**

Networking of classroom computers is an effective way of using technology. The teacher can monitor what students are doing on their personal computer from a central point. Computer networking ensures that students do not deviate from what they are instructed to do. An alarm is raised on the central monitoring computer immediately a student deviates from the set instructions. Networking simply interconnects different classroom technologies to allow sharing of resources.

**Distance Learning**

Schools and training institutions have developed portals to facilitate distance learning. Students who find it hard to attend a class, or who cannot travel because of geographical locations can become part of the classroom using video technology and shared computing resources.

**Virtual Field Trips**

Computer systems and the Internet allow students to virtually travel anywhere the web can take them. Google classroom is a technology that can facilitate field trips to locations around the world or even outer space. New augmented reality and virtual reality technology can also provide students with the opportunity to see places or events they normally won’t get to experience.
**Word processing applications**

Most computers come with word processing applications installed. For instance, Microsoft Office includes all necessary applications required to compose and organize data. Students can use these applications to write notes, check the spelling of words as they write with auto spell-check feature, and save notes for quick retrieval at a later date. Word processing applications help students discover new words. Teachers can teach students to use these classroom technologies during the learning sessions.

**Advantages and Disadvantages of Digital Technology in Education**

Digital technological achievements have turned the world to a big and comfortable place for people to live in. There are no doubt about how they have made people lives better and easier, especially in the fields of science, medicine and education. It can be used at all levels of education starting from nursery to University. However, like many other good things that have advantages, technology also has its disadvantages. Tools, such as computers, mobile devices and the internet, are now integrated into the educational system. The usage of digital technology in education has both advantages and disadvantages. Pano Savvidis, (2016), has highlighted six advantages of using digital technology in the classroom.

**Digital technology improves engagement**

When technology is integrated into lessons, students are expected to be more interested in the subjects they are studying. Technology provides different opportunities to make learning more fun and enjoyable in terms of teaching same things in new ways. For instance, delivering teaching through gamification, taking students on virtual field trips and using other online learning resources. What is more, technology can encourage a more active participation in the learning process which can be hard to achieve through a traditional lecture environment (Pano, 2016).

**Digital technology improves knowledge retention**

Students who are engaged and interested in things they are studying, are expected to have better knowledge retention. As mentioned before, technology can help to encourage active participation in the classroom which also is a very important factor for increased knowledge retention. Different forms of technology can be used to experiment with and decide what works best for students in terms of retaining their knowledge (Pano, 2016).

**Encourages individual learning**

No one learns in the same way because of different learning styles and different abilities. Technology provides great opportunities for making learning more effective for everyone with different needs. For example, students can learn at their own speed, review difficult concepts or skip ahead if they need to. What is more, technology can provide more opportunities for struggling or disabled students. Access to the Internet gives students access to a broad range of resources to conduct research in different ways, which in turn can increase the engagement (Pano, 2016).
Digital technology encourages collaboration

Students can practice collaboration skills by getting involved in different online activities. For instance, working on different projects by collaborating with others on forums or by sharing documents on their virtual learning environments. Technology can encourage collaboration with students in the same classroom; same school and even with other classrooms around the world (Pano, 2016).

Digital technology helps students to learn useful life skills

By using technology in the classroom, both teachers and students can develop skills essential for the 21st century. Students can gain the skills they will need to be successful in the future. Modern learning is about collaborating with others, solving complex problems, critical thinking, developing different forms of communication and leadership skills, and improving motivation and productivity. What is more, technology can help develop many practical skills, including creating presentations, learning to differentiate reliable from unreliable sources on the Internet, maintaining proper online etiquette, and writing emails. These are very important skills that can be developed in the classroom (Pano, 2016).

Digital technology benefits for teachers

With countless online resources, technology can help improve teaching. Teachers can use different apps or trusted online resources to enhance the traditional ways of teaching and to keep students more engaged. Virtual lesson plans, grading software and online assessments can help teachers save a lot time. This valuable time can be used for working with students who are struggling. What is more, having virtual learning environments in schools enhances collaboration and knowledge sharing between teachers (Pano, 2016).

Disadvantages of digital technology

Everything is good in moderation, and technology is no exception. Here are some disadvantages of using digital technology in the classroom as highlighted by Brown Cassey.

Excessive screen time

It can often seem that students are constantly in front of a device cell phones, tablets, computers, and gaming devices are prevalent in their lives. Adding technology to the classroom increases the overall amount of exposure to electronic devices. There are concerns that too much screen time can damage eyesight and, while disproved by science, a common misconception persists that it is associated with depression. This impact can be minimized if parents and teachers limit the number of hours students spend in front of screens (Brown, 2019).

Distractions

Technology can be a minefield of distractions. Ads, pop-ups, games, news, fun websites, social media, text messages, and more are constantly competing for our attention. This means teachers face the challenge of keeping students on task. How can we ensure students are doing what they’ve been assigned? By setting clear expectations and consequences, teachers can help encourage students to focus on their work. Parents and districts can also set up
internet blocks to help keep students from visiting other sites when they are supposed to be working (Brown, 2019).

**Cheating**

Cheating has always existed, yet technology has made it even easier in some ways. Students can copy and paste each other’s work into their own assignments. They can even search the Internet for other people’s works and submit them as their own. However, tools like Turnitin can help combat plagiarism. Teachers can require students to submit their papers and Turnitin will determine how much of the paper is similar to current or past submissions. It will also mark any anomalies it discovers for the instructor’s review (Brown, 2019).

**Less human interaction**

When students use technology devices, they have less human interaction. Teachers and parents worry that lack of face-to-face socializing will leave students unable to communicate effectively when they need to have a real-life conversation. In reality, tech is just a tool designed to make our lives easier. Tech devices are the most advanced educational tools we have today following in the steps of other transforming classroom technology like chalkboards and pencils. As with any tool, how you use it matters. Technology devices support complex communication. They give students a way to work together on projects, access to a vast library of information and knowledge, and connect them to the wider world, which expands their horizons. If teachers and parents are still concerned about the time spent on a device, they can moderate screen time and provide activities that encourage more traditional interactions (Brown, 2019).

**Unequal access to technology**

Not all students have access to technology. Depending on their socioeconomic status and living environment, some students may not have access to reliable Wi-Fi or be able to afford dependable devices. These disparities can affect online learning activities, online assignments, and access to online help. There are some schools that provide technology for students, which is certainly helpful. Some educational grants can also help offset the costs of technology (Brown, 2019).

**How can a French teacher use digital technology to teach?**

Today digital technology offers an infinite number of possibilities that a French teacher can use to teach French differently to his/her students. Moreover, the use of digital technology in teaching French is an asset that will allow the teacher to vary the supports and have a better communication. In addition, the use of these technologies allows direct access to the language through textbooks, articles, songs, videos and audios, which will always emerge more and more from their students. By using these new tools in French class, the teacher will enable his/her students to be more autonomous and establish a new relationship with the French language by becoming more active. It then becomes more interesting to approach the language in its different forms.

The internet gives the French teacher instant access to French textbooks online, journals written by scholars on French language, and other information as regards the language. Let's start with the most complete and practical environment, because it is entirely online, that is
Google: messaging (Gmail), word processing (Docs), presentation (Slides), spreadsheet (Sheets), planning (Calendar), blog creation (Blogger), file hosting (Drive), questionnaires (Forms), etc. This online suite is ideal for collaborative work and requires only a simple Internet connection. There is even Google Classroom, a web app for teaching.

According to Elona (2015), “internet is perhaps the most effective in language teaching for the many advantages it presents. The Internet also serves as a medium for experiencing and presenting creative works. It promotes higher order thinking skills. Students develop communication skills by negotiating, persuading, clarifying meaning, requesting information, and engaging in true-life, authentic discussion. They develop social skills and their computer skills are promoted as they become able to use the computer (Elona, 2015). The Internet provides supplemental language activities which help students to develop their language skills (Singhal, 1997).

PowerPoint presentation is one type of digital technology tools by which the teacher can present images and texts with sound and simple animation. According to Gordon (2007), PowerPoint presentation is a presentation software (PS) by which combination of images, texts, sounds and graphs is possible in order to make developed multimedia presentations.” PowerPoint can provide assistance for language teachers with audio, visual and audio-visual effects during teaching in language classrooms. Therefore, the French teacher can use PowerPoint to present and organize classes. He can make a slide show of his/her lessons to the students. According to Jones (2002), using presentation software such as Microsoft PowerPoint generally needs little training in its use. Templates make it very easy to develop a good looking slide show. Media incorporation is straight forward as well as graphics, audio, and video can be added from pull-down menus. In addition, the French teacher can use PowerPoint, by adding a voiceover to his/her slides and save the presentation as a movie for the students to access. Carlos (2008) cited by Alshahrani (2017), illustrates in his study that the administrators and teachers describe PowerPoint as a very useful teaching aid and a valuable technology.

The Hot Potatoes software allows the teachers to make interactive assessments for students. The program offers some distinct modules for designing multiple choice quizzes, free questionnaires, crossword puzzles, tests and gap-filling texts. These modules are the computer and then can be shared on websites. So the French teacher can make use of that software during his/her teaching.

Blogs are a great way to get your students to collaborate and create something connected to the topic you are teaching. The French teacher can instruct his/her students to consult some of the blogs that teach French. After that he can ask them to create their own version of a teaching blog on Blogger. In that way they will grip with the subject matter whether it’s grammar, literature or culture in order to teach others.

The French teacher can make use of audiovisual equipments during his/her teaching. The classrooms can be equipped with an audiovisual component system which can be linked to a laptop/ USB device. French teacher should aim to master the basic operational systems. This component system requires high technical skills to alter or restore settings or regain connection after power supply cut out. Waiting for staff to come and waiting for the system to be reset can considerably disrupt the pace of the lessons.
The French teacher can record his/her own grammar or culture lessons, and then post them on YouTube for his/her students to access it that will help students a lot in learning French. The French teacher can also encourage his/her students to watch instructional videos made by others users. For instance, the students can log in to Learn French with Alexa which teaches grammar, culture and pronunciation.

Podcasts are easily available and offer a variety of topics. They are useful for pronouciation and vocabulary purposes, as well as being a comprehension exercise. French teacher can use Learning with French-Podcasts.com, which has various categories. The French teacher can listen to the podcast sometimes with simultaneous English translation and then download the PDF transcript and he can also encourage his/her students to use Podcasts. This will help the students improve their listening comprehension, pronunciation and vocabulary.

Conclusion

There is no doubt that digital technology has been noticeable and touched the life of everyone all over the glob. The purpose of using digital technology in teacher education cannot be overemphasised. Because it allows teachers to communicate with their students, share vital information with them, upgrade teachers’ skills and knowledge as well as that of their students. To be able to achieve such a great achievement there is a need for teachers and students to acquire efficient knowledge and skills on how to make use of the digital technological tools for teaching and learning. It is also important that teachers and students are provided with the necessary tools and equipment required for the achievement of the goals.

In addition, the use of digital technology allows students to be much better prepared for class, and provides teachers with attractive resources to make their classes much more human and sociable, where all students have the opportunity to participate regardless of their level. When used alongside traditional teaching, new technology can differentiate between educational centres, taking French teaching one step further in paying attention to diversity in the classroom and enriching the language learning process.
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Research on the Design of Cultural Creative Products From the Perspective of Cultural Identity

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Abstract
Improved cultural soft power is now a strategic goal of cultural building in nations all over the globe, as economic globalization has hastened the intermingling and collision of cultures. As a result, we should pay attention to how product design shapes culture, as this aids in developing cultural identity. Cultural creative products are a result of the development of cultural industry. They satisfy their essential attributes as products while also expressing a specific culture through the medium of products, which expands the influence and spread of culture and meets people's inner desire to express their culture and their identification with culture. Based on the perspective of cultural identity, this paper introduces the meaning of cultural identity and its characteristics, as well as some related scholars' research, and uses creative products as an entry point to analyze the current cultural identity dilemma faced and explains through design cases that can obtain cultural identity. And we will discuss cultural creative products that may get a consumer's cultural identity via design cases. We will investigate the development strategies of cultural creative products on account of cultural decoding to create products with cultural identity and resonance. The study findings might lead to new ideas for fostering cultural identity and developing cultural creative products. At the same time, it is essential to realize cultural identity and enhance cultural confidence in the context of modernization and globalization today.

Keywords: Cultural Identity, Cultural Creative Products, Creative Design, Brand Design, Cultural Encoding and Decoding
Introduction - Cultural Identity

Cultural identity refers to the positive recognition and acceptance on the connotation of cultural expression. Cultural identity is the recognition of a common culture among individuals or members of a common society. Meanwhile, this recognition is not only an intrinsic motivation for the consumption of cultural products, but also the spiritual foundation for the continuation of the state and national community.

Cultural and Creative Products

A. Concept of cultural and creative products

Understanding the terms "creative products," "creative industries," and "cultural and creative industries" is necessary before attempting to define precisely what "cultural and creative products" are. Creative items include physical materials, activities and services. Artists produce new ideas with these elements, which have symbolic meanings. Economic activities with cultural creativity as the core are defined as the creative industry. Taking culture as the background and innovative thinking as the concept, combined with creative design, the final purpose of the cultural and creative industry is to produce items with a lot of additional value. "Creativity" serves a crucial function in this new industry. The UK was the first to introduce the term "cultural and creative industry" and promulgated relevant documents for it, such as the "Creative Industry Pathway Document". The document explained those who work in the cultural and creative industry, stating that these practitioners are a new type of practitioners who create wealth through personal creativity and talent combined with intellectual property. At the same time, John Hawkins, the father of the British creative industry, published the book "Creative Economy", which pointed out that the creative economy generates about $22 billion in economic benefits worldwide every day. Moreover, this benefit is increasing at a rate of 5%. It is evident that the economic expansion of this new industry is staggering.

Cultural and creative products have received much attention and promotion in this context, relying on the cultural and creative industry take for foundation and an essential branch for their development. Simply speaking, cultural and creative products mean taking material products as carriers, using creative design means and incorporating innovative thinking. The key value of this product is "culture" and "creativity", and it is meanwhile a new channel for cultural dissemination and cultural identity.

This type of product is the development and innovation of cultural resources, so that it is endowed with cultural elements disseminate cultures, create cultural brands and stimulate cultural identity.

B. Characteristics of cultural and creative products

Cultural and creative items are products driven by consumer demand that prompt the integration of culture and creativity. Creativity inspired by culture as a resource is intangible and can only be carried by tangible carriers, thus realizing its function of spreading culture over the globe. So, products of culture and creativity have both "tangible" and "intangible" qualities.

Second, getting cultural elements and designing and making material carriers are essential to making cultural and creative products. The most important thing about cultural and creative
products is that they not merely possess the same basic features as other products, but they also make people feel good on a spiritual level through things like cultural connotations and creative thinking. These intangible cultural elements can connect consumers' emotional appeals and cultural needs in a roundabout way. Creativity, culture, intangibility, and identity are certain things that make cultural and creative products suitable.

C. Basic attributes of cultural and creative products

1) Value attributes of cultural and creative products

The worth of cultural and creative items is derived from their latent cultural components. According to these implicit cultural elements, the main values of the products are classified as cultural function value, cultural experience value and cultural information value. Secondly, from the consumer's perspective, cultural and creative items consist of use value and conceptual value (Wufei, Li, 2009). The worth of cultural and creative items is typically higher than regular products with the same function due to these valuable features.

2) Cultural attributes of cultural and creative products

Since these products possess a powerful connotation of cultural symbols, they can form a symbolic cultural image. Moreover, through symbolic communication, these products can evoke consumers' emotional appeal, thus stimulating their cultural identity and sense of belonging.

3) Brand attributes of cultural and creative products

By utilising the visual impact and creation presentation of design methods, cultural elements and cultural symbols, a channel for the development of brand identity associated with culture will be created. It is evident that the cultural and creative products have enhanced the brand identity. This facilitates the formation of consumer preference for product brands and the strengthening of their brand loyalty.

Secondly, the symbol and identifiability of brands of cultural and creative products can make the products stand out among many commodities. Meanwhile, it can greatly enhance the brand value and increase the sales of the products.

D. Constituents of cultural and creative products

1) Cultural elements

Any cultural creative item cannot be produced without the support of cultural elements, which is the key to make them different from general products. Designers should research the cultural context before developing culturally and creatively inspired products. So that the general public can genuinely build a cultural identity through cultural and creative items, they can creatively offer the products' cultural features to consumers.

2) Formal element

As the most intuitive feeling for consumers to know a product, the form is also the material presentation of cultural and creative products. Formal elements are the external presentation
of the product, including the shape, technology, color, pattern, texture and material of cultural and creative products.

3) Functional elements

In cultural and creative products, functional elements are one of the key factors for consumers to consider whether to buy the products or not. This function mainly refers to what value the product can be used to achieve. The prerequisite for an item to become a product lies in its use value. Therefore, the starting and ending points of cultural and creative products must be to create items that are accepted or needed by consumers.

4) Aesthetic elements

Secondly, under the premise of meeting the use function, aesthetic elements should also be taken into consideration when designing cultural and creative items. In addition to being a crucial component of cultural and creative items, it also serves as a key differentiator between them and everyday goods. Ordinary products are designed according to the principle of "function determines form", while cultural and creative products emphasise the interplay of function, culture, and aesthetics. This is because aesthetics can add emotional value to a product and influence consumers' purchasing decisions.

5) Emotional elements

When consumers first know the product, the direct factors such as the shape, function and color of the product will leave them an initial impression of the product. Based on these emotional factors, and by combining these cultural elements with themselves, a certain positive cultural identity or emotional collision will be generated among consumers. When this emotion is generated, it will have a positive effect on the value of the product, thus prompting consumers to be willing to pay for this emotional factor. As a result, throughout the design process for cultural and creative items, developers should purposefully integrate emotional factors that can cause cultural identity, so as to drive the emotional resonance of consumers.

E. Design requirements for cultural and creative products

The design of cultural and creative products should not only reflect the functionality of the products, but also highlight its cultural and spiritual connotation, with the aim of evoking consumers' sense of identity. This requires designers to understand the close relationship between products and culture when in the practice. Products are the physical manifestation of culture, while culture is dependent on products. In the specific design, the creative form of the product can help consumers understand the cultural connotation that the design is intended to convey, thus generating an overall evaluation of the product. This evaluation determines whether consumers are willing to pay for cultural and creative products. On this basis, designers are required to fully understand the intrinsic core values of the cultural and creative products and design them by means of creative design (Tsai et al., 2007).

Current problems in cultural identity confronted by cultural and creative products

Numerous issues possess surfaced due to the tendency to set up cultural and creative goods fleetly. The problems are classified and summarized as follows:
1) Lack of innovation

The design of cultural and creative objects lacks innovation. For some products, cultural elements are only simply applied on the surface of the products or some unrelated cultural elements are integrated to the products. At the same time, there is no in-depth excavation of cultural connotation, thus the targeted product positioning cannot be done, but to simply imitate the existing design of cultural and creative goods. Also, there is nothing in-depth research on visual language and design elements, which leads to the lack of cultural characteristics of the products and thus cannot be recognized by consumers.

2) Failure to dig deeper into user needs

For many cultural and creative products, when market research is conducted, the target groups of the products have not been subdivided, so that it is impossible to create cultural and creative products with various demand levels. Secondly, the emotional needs of users have not been deeply explored. The existing cultural and creative products lack emotional communication and have inconspicuous cultural characteristics. Therefore, these cultural and creative items are unable to evoke users' emotional resonance, thus lacking cultural identity in the design.

Cultural decoding and encoding

A. The concept of encoding and decoding of the design of cultural and creative products

The encoding and decoding of the design of cultural and creative products involves the concept of semiotics. Therefore, before explaining these two concepts, the basic concepts of product design semiotics will be introduced. According to Peirce's semiotic theory, symbols are perceived by attaching to material carriers to achieve their spiritual function. Cultural and creative items can physically carry symbols. The cultural symbols in the products are the process of the designers' incorporating cultural images into the products after concentrating and extracting them through creative means. The whole creation process can be regarded as the process of encoding and reorganization of cultural symbols by designers. Figure 1 explains the relationship between culture and product.

![Figure 1: The Relationship Between Culture and Product](image)

1) The concept of coding in cultural and creative design

Designers and related product design developers play the role of coders of cultural and creative goods. As coders, they conduct full research on the target consumer groups of cultural and creative products and then synthesize design codes for the figurative elements
such as shape, color and quality in the products and the abstract elements that constitute the practical functions of these products. In this process, on the one hand, designers need to use artistic means to refine visual elements and integrate these symbols into the shape, function and material of cultural and creative items. As opposed to that, these symbolic codes can link the products with consumers' cultural perception and identity, thus forming useful cultural codes. Figure 2 explains the roles of encoding and decoding.

![Figure 2: The Roles of Encoding and Decoding](image)

2) The concept of decoding in cultural creative design

Through appreciating and using the products, consumers play the role of perceiver and interpreter of the decoding of cultural and creative products in this mutual communication process. When they appreciate the cultural and creative products, the interpretation of the products is formed through using and understanding the products. They get to know the implicit knowledge and cultural connotation of the products, and their cultural identity is formed in the process of cognition. This is the decoding process.

It can be seen that designers and related product developers are accountable for the encoding of cultural and creative goods, while consumers are the decoders. In the process of encoding and decoding, cultural knowledge is transmitted to generate cultural identity. In this process, code products with cultural characteristics and emotional appeals play a key role in promoting cultural identity (Ting Shen & Daze Dong, 2017). Therefore, successful cultural and creative products are usually able to generate cultural identity and cultural resonance in the process of encoding and decoding (Figure 3).
B. The design path of cultural and creative products based on cultural identity

Cultural identity is to realize the innovative design of cultural and creative products by awakening users' memory of culture, thus becoming a "cultural bridge" connecting products and users. Unique cultural and creative products are developed to build a close cultural connection with consumers and inspire their cultural resonance. The basic design steps of this innovative product can be summarized as arousal - association - recognition. The main paths are as follows.

1) The principle of cultural elements as the core

The process framework for the design of cultural and creative products is made up of culture, creativity, and product. First, in addition to relying on existing cultures, creating cultural and creative products also helps shape new cultures. Symbols also convey the product's cultural significance. For this reason, cultural symbols serve as the engine behind the scenes that spreads the product's cultural meaning, which influences the existence and operation of the product all the time. Therefore, as part of the creation of cultural and creative products, cultural elements need to be taken as the core principle. By referring to and sorting cultural forms, these forms are classified and the essence of cultural forms is extracted. Combined with creative design methods, the characteristic cultural symbols and forms are recoded in the context of modern aesthetics. The product can be self-explanatory and can explain the cultural meaning behind it by itself. On this basis, creative products with cultural recognition are created, which can convey culture to consumers, cause cultural resonance, stimulate consumers' cultural identity, and invariably enhance the cultural value of the product.

2) Branding principle

Brand is the core factor that distinguishes a product or service from others. Brand design incorporates the core elements of a company or product name, tagline, and iconic graphicsymbols (He Jiaxun, 2000). In other words, one of the important roles of branding is
to bring recognition to the product. Consumers consume products of the brand to express themselves, explore their emotional belonging and cultural identity.

By establishing the cultural brand of the product, the sense of visual identity of the product can be unified and at the same time the channel for product development can be expanded. Secondly, designers can use cultural elements to create brand characteristics. Through the development and innovation of culture, cultural association is implanted into the product to build symbolic meaning and cultural image, thus arousing the cultural identity of consumers. At the same time, through the brand image, a sense of cultural identity is aroused among consumers while ensuring product quality, thus creating brand added value. The relationship between cultural and creative products, brand values, and customers is described as follows (Figure 4).

![Figure 4: The Relationship Between Cultural and Creative Products, Brand values, and Customers](image)

### 3) The principle of serialization

First, product serialization has a strong visual impact and appeal. It can present the product style directly to consumers. Therefore, in contrast, serialized products have a stronger visual impact than individual products. At the same time, the confusion caused by the inconsistency of product style can be avoided. Second, serialized products have a stronger sense of cultural expression. This is because serialized products can reinforce the aesthetics in the form design of the product. On the other hand, through repetitive forms, serialized products make consumers remember the brand deeply and stimulate exchange of information effect of the cultural and creative brand. Finally, serialized items can expand the types of cultural and creative products and reduce the evolution cost. Nevertheless, serialization can reduce the development time and cost invested in each product according to product development and production. The same tooling can be used in most of the products in the series, thus greatly reducing the development cost invested in individual products.

### Conclusion

At present, cultural and creative design is developing rapidly, and thriving cultural and creative products can stimulate consumers' cultural decoding and identification ability. Therefore, designers should explore and construct the meaning of cultural symbols under the premise of cultural identity. Only by leaving a cultural imprint on consumers and realizing the process from consumers' viewing and purchasing products to cultural experience can a cultural bridge between products and consumers be built. In this way, the innovative design
of cultural and creative products is achieved, in order to enhance the cultural connotation of
the products and form a unique cultural brand and image. From the perspective of cultural
identity, this paper has analyzed the evolution strategy of cultural and creative products,
which can provide some theoretical citations for future related researches.

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Abstract

In Egypt and according to recent statistics, the poor represent about 48% of the total population, which is an indication of the low standard of living and high poverty rates of a wide range of the people of Egypt. This makes the presence of street vendors important to provide goods or some services to large groups of people as the cost of these goods or services might be much lower to match the financial ability of the poor. Not allowing street vendors to work for safety or aesthetic reasons might lead to a bigger problem. In this way, street vendors will become unemployed which paves the way for crime and many illegal practices such as robbery or even drug trafficking—something that governments, for sure, would like to avoid. This means that the negative effects of prohibiting street vendors from work are much more than those of allowing them to work. Therefore, it is really important to provide the environment required for street vendors with a full understanding of their needs in order to reach to the aim of integrating the street vendors outcome into the national production system. This research paper deals with the problem of street vendors and proposes a solution for organizing street vendors in a way that is compatible with their communities. This will help in raising the financial income, and as a result, improve the living standard of the poor.

Keywords: Poverty, Street Vendors, National Production, Living Standard
1. Introduction

In Egypt, most of the poor people tend to work as street vendors as it is the easiest way that could help them to earn money. Street vending is an occupation that does not require any educational or huge financial background. Street vendors usually provide a lot of the items that a person might need such as clothing, food and even household utensils. Street vendors could easily spread in many places such as markets, near governmental buildings and residential areas, just to name a few. This is why the Egyptian government has started to search for solutions to make work easier and legal for those simple business people by creating laws to protect them (El-Kadi 2013) (Figure 1).

![Figure 1. A picture shows the Street Vendors in Egypt](https://gate.ahram.org.eg/Media/News/2021/2/20/2021-637494308481054013-105.jpg)

1.1. Research Problem

It is estimated that the total number of street vendors in Egypt exceeds six million (Report on Poor People's Status in Egypt, 2010). Street vendors spread all over the cities of Egypt especially in overcrowded areas. Unfortunately, the majority of street vendors do not meet beauty and safety conditions because they are unorganized and do not follow the hygiene requirements in case, they serve food. This is what creates a serious problem in Egypt.

1.2. Research Objective

The research aims to solve the problem of Egypt's Street Vendors, by:
- Determining the impact of street vendors on society.
- Highlighting the latest experiences of different countries to solve the phenomenon of street vendors.
- Shading light on the Egyptian experience to solve and evaluate this phenomenon.
- Proposing solutions to deal with the phenomenon of street vendors.

1.3. Research Hypothesis

The presence of street vendors is highly attached and vital to the people of low financial capacity, and this is what justifies their presence in almost every city in the world. Reducing street vendors' numbers is not the way to solve this problem; however, they should be well employed and organized in a way that would enrich their surrounding environment.
2. The Impact of Street Vendors' Activities

2.1. Economic Impact

Street vendors have become an important part of any local economy worldwide as they are able to satisfy the various needs of the urban community. This could be achieved by providing a wide range of services with low prices like food, clothes, electronics and even building materials, etc. Moreover, the developing world, including Egypt, highly depends on agriculture and the outcome of agriculture. In poor agricultural communities, where farmers struggle to sell their products, street vendors come as a way out for both the farmer and the customer (Terraviva, 2006). In this way, the prices of the agricultural products would be acceptable for both the farmer and the customer, which in a way or another, plays a helpful role in achieving food security for the low-income communities (Gogte; Talnikar; Patil, 2019).

2.2. Social Impact

Most of the time, the relationship between street vendors and the government is not that romantic one. Street vendors feel insecure because the government with the help of the police tries to close their businesses. When chased by the police, most street vendors react and try to express their anger by using inappropriate words and/or behavior. This has its negative impact on the society and is not a feature of a civilized community. This is why organizing street vending might improve street vendors' feeling of security within their communities which will have its positive impacts on the members of the society (El-Kadi 2013).

2.3. Health Impact

One of the challenges that the Egyptian government faces when trying to transform unorganized street vending into an organized system is the installation of an infrastructure to the system of street vending. This is due to the fact that most street vendors are usually located in overcrowded places because this increases the chances of more sales and more financial income and profits to those small business people. However, being placed in overcrowded locations in which the possibility of physical distancing is very low results in ignoring following the basics of hygiene, and the simplest example is hand washing. Moreover, it seems that following the health regulations during the COVID-19 lockdown all over the world, including Egypt, was not in favour of street vendors in which their businesses and financial income were negatively and dramatically affected, and as a result, severely affected street vendors' families and their standards of living (Figure 2 [Skinner, n. d.] [Sepadi1; Nkosi, 2022]).
2.4. Urban Impact

Urban and architecture planning does not take into account planning for street vending as presented in the following:

a- Aesthetic impact

Street Vendors depend on simplicity and basic factors to protect their products. They display their products on simple carts placed under umbrellas for protecting their goods, which most of the time is not accepted neither by passers-by nor by customers who usually do their shopping at nearby malls (Figure 3 a) (El-Kadi, 2013).

b- The traffic impact

As mentioned above, street vendors target crowded places to display their products such as city centers. Thus, they occupy sidewalks and sometimes streets causing traffic jams and street blockages (Figure 3 b) (Taye, 2020).

c- Walking pauses impact

It is very important to provide a period and a place for rest for pedestrians. The presence of street vendors may be of benefit in this case and may act as an attraction factor; however, street vendors might also be a factor of tension and discomfort for pedestrians. This is mainly because street vendors are randomly located in the areas where pedestrians are supposed to walk safely. In this way, pedestrians find themselves forced to walk on the driving roads which is really dangerous and violates pedestrians' safety procedures (Figure 3 c) (Hagos; Adnan; Yasar, 2019).
Depending on what is mentioned previously, the presence of street vendors is not completely negative; nonetheless, the presence of street vendors had a number of positive aspects that may help in leading to the best way to deal with this phenomenon. There is no need to consider street vendors as a problem or a "cancerous spot" that should be removed forever as stated by Dr. Atef Sedky, the Prime Minister of Egypt in the nineties of the last century (Al-Kadi, 2013). On the contrary it is very important to take into consideration that removing them is not the way to solve the problem because they will simply continue to appear over and over again as long as the problem of poverty still exists.

3. Street Vendors in Egypt

When it comes to their place, street Vendors do not stick to one place, but rather they are usually scattered and can be seen everywhere in city centers. However, most of street vendors do not have the permission to be located on the streets or the sidewalks to sell their merchandise. According to Arafa (a Professor of Local Administration), it is estimated that the number of random markets in Egypt exceeds 3,425 in which five million street vendors work in 27 governorates. On average, sales of those street vendors in total reach about 1.5 million Egyptian pounds per month, i.e., the sales of one street vendor are about 300 Egyptian pounds per day.

The Egyptian government places restrictions and sometimes prohibits the activities of street vendors who do not have licenses, do not pay taxes, and/or illegally occupy sidewalks and streets and other public places. As a result, the local authorities with the help of the police deal with such violations and remove all the street vendors’ carts that do not apply the government’s rule concerning street vending (Figure 4). It is worth mentioning that most street vendors, after police raids, do not give up and return to their illegal places. This means that the huge problem they create is still there—a problem that threatens the security of street users, traffic, and public places (Ali, 2010).
3.1. Street Vending Law No. 105 of 2012

If street vendors violate the regulations of street vending stated by the government for the first time, they may face imprisonment for a month and pay a fine of five hundred Egyptian pounds. If the violation is repeated, street vendors face imprisonment for six months and pay a fine of five thousand Egyptian pounds. Unfortunately, the law has been applied to less than 1% of street vendors which means more side effects such as theft of electricity, traffic congestion, obstructing pedestrians, and many other aspects including the social and psychological side effects (Hamed, 2019).

4. An International Experience to Deal with Street Vendors (Jakarta’s Street Vendors Experience)

Jakarta is the capital of Indonesia, and street vendors are literally occupying every single spot of the city including streets and sidewalks (Figure 5 a-b). Ahok, the governor of Jakarta, stated that "dealing with street vendors is like watching Tom and Jerry. It never seems to end" (Tichelaar, 2016).

The experiment is based on the principle of assembling street vendors in the city center where they already exist. It is through an urban and architectural solution by rebuilding the damaged part of a building that was damaged in 2015, renovating the whole building, and providing an
environmentally friendly roofing for the central yard that contains various activities as follows (Tichelaar, 2016):
- Street food & informal trade
- Restaurants
- Shops
- Offices
- Entertainment (an open-air festival, and movie theater) (Figure 6-7)

Figure 6. Assembling street vendors from streets around the new market (Tichelaar, 2016)

Figure 7. A prospective showing the design of the new market (Tichelaar, 2016)

5. Proposed Solutions to Reduce Poverty Problems in Egypt

5.1. Make New Markets

Civilized and modern markets have been set up in several cities in Egypt to eliminate the random popular markets and their negative effects, and to reduce unemployment.

A number of these markets were set up in Cairo (Al-Tuwnusi [figure 8a], Dir Al-Naahia, Zawiya Al-Jadid [figure 8 b], Al-Mawaridi, Al-Khamis Bialmatria). More modern markets have also been established in Port Said (El-Bazaar Market - Souk Al-Asr 1-2 [figure 9]).

These markets meet the civil protection and security requirements and take the preventive and precautionary measures. They provide all the services and the friendly designs that both the vendors and the customers may need including the stalls, booths, stands, warehouses and may other facilities (Nasser, 2021).
6. Evaluation of the Experience of Setting up New Markets for the Street Vendor

The previous projects presented in (figures 8-9) are new ideas to solve the problem of street vendors. However, with their presence, new problems have emerged. Firstly, the location of the new markets is far from the street vendors’ past crowded working places where they preferred to sell their merchandise. Secondly, their past working places where close to where they live, while the new markets are exactly the opposite. The same idea can be applied to the customers—something that cannot be ignored as it has its negative effects on the street vendors’ sales. This is why these new markets have become unusual and uncomfortable for both the workers and the public.

In addition, there are differences between the street vending experience of Jakarta and that of Egypt. Jakarta’s Street Vending experience is a successful one in which the Indonesian government worked on assembling street vendors from the streets around the new market, while the Egyptian experience the new markets, as mentioned before, are far from the past working places of the street vendors. In Jakarta, the location of the new market is in the city center, while in Egypt this condition cannot be met because the cities are crowded, let alone their overcrowded city centers.
7. Analytical Study

As Jakarta, street vendors in Egypt spread on the sidewalks and streets, as shown in figure 10, but there are no open spaces to assembling them. Therefore, the most appropriate and possible places to improve street vendors are streets and sidewalks.

![Diagram showing street vendor locations](source: Tichelaar, 2016)

**Figure 10.** Places where street vendors are located [Tichelaar, 2016]

7.1. Suggested Solutions

There are two types of streets:
- Wide streets as Port Said Street in Cairo
- Narrow streets as Qasr al-Nil, Sherif Fouad, Talaat Harb, and Abbas El Akkad

Thus, two solutions have been proposed to organize street vendors in the middle of cities in a modern civilized manner.

7.1.1. First Suggestion: Proposing collective markets on the wide streets

Port Saeed Street in Cairo was chosen, and the proposal was to use the street by establishing a market for street vendors on top of it (figure 11 a-b) through the construction of a lightweight building containing shops, stores and green spaces that can be used as food court, sittings, etc. (Figure 12 a-b). The building entrance is just elevators that spread over the sidewalks (Figure 13).

![Site plan of the chosen site](source: The researcher)

**Figure 11.** a- The chosen site plan

![Site plan of the market](source: The researcher)

**Figure 11.** b- Market's site plan

(Source: The researcher)
In the following figures, it is suggested that the roof of the market have a tent structure that is usually made from a light material like canvas (as figure 14 a). Elevators can also be in the center of the market and can be accessed across refuge islands, through stairs, or underground level (as figure 14 b).

7.1.2. Second Suggestion: Suggesting civilized kiosks in narrow streets

Qasr El-Nile Street in Cairo was chosen. (Figure 15 a). The proposed kiosks are scattered along the street or liner within the location of the street vendors on the sidewalks (figure 15 b). The design of the kiosks is simple, lightweight and removable. The use of alternating kiosks enhances the walking pauses and reduces crowding. It also gives an aesthetic value
which is achieved by studying the sidewalk in a way that creates rhythm in the design. (Figure 16 a-b-c).

8. Conclusion

- Though considered informal, street vendors play a significant role in enhancing the economy of the developing countries.
- The presence of street vendors is not all negative, and prohibiting their businesses is not the right choice because they play positive roles regarding the economy, attraction and society.
- The Egyptian Government has been dealing with and trying to find solutions for poverty. Yet, when it comes to street vendors, the Egyptian government does not seem to take their needs into consideration. This study has presented ways to improve and formalize the businesses of street vendors instead of eliminating them.
- Establishing small and medium enterprises to support street vendors would be the way to the best solution. Carrying out such initiatives by the government would help to improve the community.
- Dealing with street vendors depends on improving their environment, their location, and not moving them to remote and isolated places (industrial for example). The research has proposed the possibility of exploiting street vendors’ gathering places, which are the streets and the sidewalks, and developing these places in environmental and civilized ways that enhance the strengths of street vendors and limit their negative points.
- The government should support street vendors by providing a good environment and securing it for them in installments in which they pay comfortably and in symbolic amounts.
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Quickly Interactive Healing Installations Nurture Resilient Communities After the Covid-19 Pandemic

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Abstract
The Covid-19 pandemic has driven the globe into a physical and psychological public health catastrophe. In this "protracted battle" against the entire human immune system and the operating structures of society, many citizens have been forced to carry a substantial psychological burden. Worse still, the majority of mental disorder residents are unwilling to seek psychological therapy at healing centers or hospitals due to the lack of mental health awareness and the pressure of negative social judgment. From the perspective of urban renewal and social integration, it is necessary, crucial, and timely to design a more adaptable, inclusive, and friendly urban public space to help more community members alleviate their inner alienation and adjust more smoothly and comfortably to their new normal lives, through literature reviews of Urban Acupuncture and its related fields, such as Human Settlements Science, Urban Catalysts, and Citizen Participation theory. Based on summarizing their reality bottlenecks and the renewal potential, the paper proposes the general visions and research questions for Quickly interactive healing installations and discovers a series of design principles to enhance adaptability. They can be summarized as 1. Tapping the regeneration potential of leftover spaces in cities. 2. Building bridges between the emotional healing installation, traditional culture, and childhood memories. 3. The organic blending of aesthetics at the appearance level, functioning at the experience level, and healing at the inclusive social level. Furthermore, the paper shows two emotional healing installations to visibly and vividly demonstrate the design principles' applicability.

Keywords: Urban Acupuncture Intervention, Emotional Healing Installation, Alleviate Alienation
1. Introduction

In early 2020, a sudden and unanticipated COVID-19 pandemic overtook the entire planet, wreaking disaster on the global economy and causing individuals to put their work, education, life, and social activities on hold. Public emergencies, such as public transportation and social communication restrictions, are risk factors for heightened levels of general psychological anxiety (Cénat et al., 2021). The suspension of work and education increases an individual's uncertainty about the future, the demand for medical supplies generates resources shortage and the spread of panic, and the fluctuating pandemic causes tremendous frustration and concern (Mazza et al., 2020). Compared to the general population, the anxiety level of health care workers is significantly higher. Society's unfriendly and unappreciative attitude toward pandemic prevention measures significantly increases the psychological burden of health care workers, reduces their professional identity, and increases negative emotions such as depression (Weibelzahl et al., 2021). COVID-19 has an indelible impact on all stakeholders' physical and mental development. Based on the literature review, this paper focuses on the adaptability of urban acupuncture interventions in public spaces and the community atmosphere. Then demonstrates a series of design principles that aim to heal the emotions of mental sub-health community residents during the post-COVID-19 pandemic era, rebuild community resilience, and further promote sustainable social innovation.

1.1 COVID-19 and the generated internal alienation among the residents

According to (Lazarus & Folkman, 1984) psychological stress theory, individuals will generate a succession of emotional, behavioral, and physiological stress reactions based on their cognitive appraisal when confronted with a significant crisis. When community residents face the unexpected COVID-19 pandemic, the stress response will trigger alterations in the autonomic nervous and neuroendocrine systems, resulting in widespread negative emotions such as fear, anger, helplessness, and panic. If negative emotions are not immediately controlled, individuals in a protracted state of stress may impair their physiological health, leading to more severe mental disorders such as depression, anxiety, and post-traumatic stress disorder (PTSD)(Turner et al., 2020).

Guo et al. (2021) used the Self-rating Anxiety Scale (SAS) to analyze the psychological anxiety of 1222 individuals. The result showed that 601 (49.2%) respondents answered that their lives were severely impacted. In comparison, 424 (34.7%) claimed that their employment was seriously affected, which may lead to a sequence of negative psychological phenomena. The accompanying unpleasant mental states may distort their cognitive judgment and weaken their psychological resilience, which may exaggerate the impact of the pandemic and have long-lasting harmful repercussions on public health.

1.2 COVID-19 put heavier psychological pressure on the professional medical team

When health care workers face the COVID-19 pandemic, their workload has multiplied in a high infection risk environment. However, the shortage of medical resources and the public's lack of understanding of pandemic prevention have contributed to the high risk of negative emotions among professional medical teams. Zhang et al. (2021) used an online questionnaire to survey 2,745 healthcare workers involved in preventing and controlling the COVID-19 pandemic. She used the Perceived Stress Scale (PSS - 10), the Generalized Anxiety Disorder (GAD - 7), and the Patient Health Questionnaire (PHQ - 9) to evaluate the psychological status of medical teams. She also categorized the fever clinics, epidemiological...
surveys, laboratory testing, and isolation centers. The results revealed 27.9% (95 percent CI: 26.2% to 29.5%) of medical team members feel stress, 30% (95 percent CI: 28.3% to 31.7%) feel anxiety, and 27.0% (95 percent CI: 25.4% to 28.7%) feel depressive symptoms.

Along with the development of COVID-19, the excessive mass media exposure associated with the pandemic has led to an outbreak of "Information Pandemic" (González-Padilla & Tortolero-Blanco, 2020), which refers to the fact that too much-mixed information makes it difficult for people to find trustworthy sources of information and may even be harmful to their physical and mental health. The spread of indiscriminate information, especially rumors, has caused panic among the population and affected public mental health (Cinelli et al., 2020).

2. The evolution of urban acupuncture theory and its associated fields

2.1 Urban Acupuncture

The theory of urban acupuncture was initially proposed by the Spanish architect Manuel de Sola Morales in 1982. The objective was to address the rehabilitation and renovation of the historic city of Barcelona. Urban acupuncture is a "micro-scale" urban development method with a "catalytic" approach. Urban acupuncture is a small-scale transformation of a specific region, which triggers changes in the surrounding environment, ultimately stimulating the city's vitality, transforming the urban landscape, and renewing the city. Ho (2017) showed a creative decision-making process of 'tracking, observing, discovering - mind mapping training - curating with thinking,' which provides another possibility to interpret urban environments. Ecological system acupuncture (Casagrande, 2012) explores the transition of post-industrial cities into organic cities. Petrova et al. (2016) offer a controversial perspective that the current strategies for urban micro-renewal still rely heavily on the subjective judgment of urban planners, which is a biased source of information. Based on this phenomenon, she proposed the concept of Urban Acupuncture 2.0. She recommended that the social media data of urban residents should be evaluated as actual social behaviors to optimize public engagement during decision-making.

2.2 Human Settlements Science

The second half of the 20th century witnessed the development of a comprehensive group of disciplines known as Human Settlements Science (HSS), which studies all residential areas, including villages, towns, and cities, and focuses on the connection between society and the environment (Doxiadis, 1970). HSS also emphasizes the political, social, cultural, and technical perspectives. The increased knowledge of ecological also closely related to the sustainable development of society. HSS has evolved and changed, from an initial focus on the technical aspects of living to a consideration of climate adaptation and social inclusion; from the isolated examination of architectural space to the exploration for a harmonious link between architecture and ecology; and from the specialist disciplines of architectural planning to the promotion of synergy among multiple disciplines (Ye & Niyogi, 2022). Organic research on social behavior under the challenge of climate crisis can create a better living environment and further promote sustainable social innovation (McBean & Ajibade, 2009).
2.3 Urban Catalysts

Catalysts are small amounts of a substance that contribute to a significant chemical reaction that operates effectively with little loss of the substance's original mass and properties. During a catalytic process, the object or environment influenced by the operating cycle is identified as the "Catalytic Effect" (Davis, 2009). Urban Catalysts (UC) means a series of mutually stimulating and harmonizing effects interactive with the city that enhance the quality of regional development without destroying the original environment and traditional culture (Attoe & Logan, 1989). The stimulating triggers of UC can be economic, such as attracting investment, and social, such as laws and regulations. UC should explore continuous and adaptive contributions to the renewal of the urban (Balvočienė & Zaleckis, 2020).

2.4 Citizen Participation

Modern public participation emerged in Europe in the 1960s when residents protested against large-scale urban demolition and the construction of massive highways, which brought public participation in urban projects to a peak, and was subsequently institutionalized (Rowe & Frewer, 2000). Civic Participation (CP) has gradually gained attention with the rise of community building. CP means individuals could enjoy their rights and responsibilities, which can be further understood as pursuing democratic ideals and egalitarian politics in a democratic society (Callahan, 2007). CP emphasizes that citizens have the right to be informed, question, suggest, reject, and take the initiative in formulating strategies. They have the opportunity to defend their legitimate interests and collaborate for their communities' prosperity and revitalization (Rosener, 1978).

3. The significance of adaptive urban acupuncture interventions in contemporary design and society

Adaptive urban acupuncture interventions are relevant to several contemporary design fields, including adaptive design, inclusive design, environmental design, service system design, and socially sustainable innovation. Adaptive and sustainable design is not limited to inanimate material resources such as land, water, transportation, or materials. Living beings are also social resources that deserve revitalization. If the entire city could be imagined as a living organism, then the residents suffering from the psychological stress of the COVID-19 pandemic are comparable to "infected sub-health cells." The public art installations, which are also dispersed across the city, have the potential to heal the community's emotions through "urban acupuncture." This also reflects the social dimensions relevant to this paper, including public mental health, resilient society, community engagement, and social emergency response.

4. Design principles for quickly interactive healing installations to alleviate the alienation

The central vision of the emotional healing installations is to establish connections between the community and the healing touchpoints to help more people in the post-COVID-19 era to relieve the alienated and move comfortably to a new normal life, which can be interpreted as which extent the environment influences the individual's emotional and social behavior. Based on this central vision, this paper proposed three research questions.
• How can public art installations have the potential to contain adaptive urban acupuncture interventions and relieve mental stress?
• How to attract more people to interact with emotional healing installations in their daily lives naturally and comfortably?
• How can public art installations become more than merely aesthetic considerations, become a touchpoint of communication and engagement across diverse populations, and promote further social innovation?

In answer to these three research questions, this paper summarizes the real-world bottlenecks and renewal potential of healing installations based on literature reviews and discovers three principles to support adaptable design.

4.1 Tapping the regeneration potential of leftover spaces in cities

Emotional healing installations can trap leftover spaces hidden in the city, such as spaces beneath viaducts, abandoned corners, under-utilized vacant lots, corner lots, etc., and insert emotional healing installations without impeding the neighborhood's movement. On the one hand, this will energize the surrounding environment. On the other hand, it will allow residents with mental illness to easily interact with emotional healing installations in their daily lives without visiting healing centers or parks.

4.2 Building bridges between the emotional healing installation and traditional culture and childhood memories

The city is a repository of history and memory, which contains unique vitality. Every renovation and reconstruction symbolizes that period's political, economic, and cultural evolution carrying several community members' cherished memories. Emotional healing installations can attempt to build bridges with the environment, traditional culture, and the surrounding community's childhood memories through various connections, such as color, shape, structure, interactive experiences, sound, and illumination effects. On the one hand, traditional culture and childhood games with a sense of familiarity can decrease the comprehensive threshold of the emotional healing installations so that the surrounding residents can understand and interact immediately. On the other hand, the interactive experience might evoke cherished childhood memories and achieve the central vision of emotional healing.

4.3 The organic blending of aesthetics at the appearance level, functioning at the experience level, and healing at the inclusive social level

Emotional healing installations can concentrate not only on the aesthetic and functional aspects but also on the creation of social atmospheres and the emotional healing of the community, through small and precise interventions in public spaces, while improving the life quality of residents, promoting an adaptive community atmosphere, foster a conducive civic participation mechanism, and encourage the growth of sustainable social innovation.
5. Design practice of quickly interactive healing installations

5.1 Discovering the leftover spaces in the target area

As shown in Figure 1, there are a series of leftover spaces exist on Chifeng Road. The author extracts elements based on the characteristics of the leftover spaces and their surroundings in order to establish connections between the shapes, structures, interactions, materials, and colors of the new emotional healing installations and the original leftover spaces.

![Figure 1. Leftover spaces exist on Chifeng Road. Source: the author.]

5.2 Rocking dragon boat installation

The No.12 touchpoint is located in the middle of Chifeng Road, adjacent to the bus stop on Miyun Road. Behind the node is a large wall painting of a dragon boat racing. This useable area is 4 meters long and 2 meters wide, while the rocking dragon boat installation is 2.4 meters long and 1.5 meters wide. The wall painting shows one of the most significant and well-known traditional Chinese festivities: the Dragon Boat Festival. The shape of the emotional healing installation seeks inspiration from the dragon boat, but the structure is simplified to make the installation more compatible with a quick interactive play scenario. The color echoes the red graffiti on the side poles, and the basic platform is textured with a linear ripple to match the general atmosphere of the street. The interactive method of the rocking dragon boat installation encourages residents and tourists to stand on the dragon boat with their feet staggered and grab the paddle attached to the bottom platform with both hands. The dragon boat will swing while they are shaking their bodies.
5.3 Lion dance ball tumbler installation

The No.17 touchpoint is located near the end of Chifeng Road. The useable area is 4.5 meters in length and 4.5 meters in width, while the Lion Dance Ball installation dimension is 3 meters in length and 3 meters in width. The structure of the installation was inspired by the ancient Chinese folk art of the lion dance, which is a symbol of the "New Year" that many local residents remember from their childhood. The emotional healing installation combines the experience of the lion dance ball jumping and tossing in the air with the game characteristics of the tumbler. The installation's appearance interacts with the red linear graffiti on the nearby poles, and the basic platform is textured with the auspicious clouds around the lion dance ball. The installation has three entrances, allowing residents to enter the ball from different directions, then they could hold the center ring railing while the ball sways.
6. Conclusion

This paper combines several design fields, including public environmental, inclusive, and adaptive design. Which also relates them to the social areas such as public mental health, resilient society, community interaction, and social emergency response. Based on the analysis of the current bottlenecks and development potential, this paper proposes three design principles that can enhance the healing effects of quickly interactive healing installations in the post-COVID-19 era, which can be summarized as:

1. Tapping the regeneration potential of leftover spaces in cities.
2. Building bridges between the emotional healing installation, traditional culture, and childhood memories.
3. The organic blending of aesthetics at the appearance level, functioning at the experience level, and healing at the inclusive social level.

From a spatial perspective, the emotional healing installations have been able to release the potential of the underutilized locations in the city, operating as "catalysts" to bring vitality to
the surrounding community and foster sustainable urban development. From a social perspective, the emotional healing installations can alleviate the mental stress of residents in a subnormal state of psychological well-being without occupying their daily space, encourage them to participate in outdoor space interactions to heal the psychological alienation caused by the COVID-19 pandemic, assist them in better adjusting to the changes, and co-create a more adaptive, inclusive, compassionate, and sustainable society.
References


Resilient Design of Public Space in Older Communities of Shanghai

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Abstract
Sustainable Cities and Communities have been identified as a future international urban development objective by the United Nations Centre for Sustainable Development (UNCSD). And as an integral component of urban development, community resilience is one of the most important indicators of a city's sustainable development level. Shanghai saw an outbreak and rapid spread of the COVID-19 pandemic in 2022, prompting the government to create a home quarantine regime with grid-based control. The abrupt adoption of the community isolation system revealed challenges with management models, service systems, and environmental maintenance, particularly in older communities. Public space is essential for sustaining the lives of residents, maintaining public health, and fostering social connections. In the face of episodic social events, public places play a crucial role in minimizing shocks, absorbing risks, and aiding restoration. This demonstrates the significance of public space in fostering resilient communities and optimizing community governance. In this paper, we examine the environmental measurements of community pandemic prevention and control, as well as the residents' mental condition, before proposing constructing a "symbiosis station" by integrating the features of resilient communities. Under the concept of government-led and multi-governance, this study seeks to establish functional transitions for different usage scenarios to fulfil the needs of ordinary life improvement and emergency defence, thereby forming a highly self-organized, self-adaptive, and self-developing community. This research chooses Shanghai Hongqiao Airport New Village as an experimental intervention location to demonstrate two survival strategies of the "symbiosis station" to test the design strategy's viability.

Keywords: Resilient Community, Public Space, Functional Transition

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1 Introduction

1.1 Introducing the problem

With strong and rapid national countermeasures, the COVID-19 episodic has gradually entered a phase of coexistence with the community. In the face of this prolonged, large-scale public health event, the community's networked management of home quarantine played a critical role in the rapid distribution, assembly, and mobilization of personnel, supplies, and outbreak information. However, home quarantine is a "double-edged sword," The community's vulnerability becomes more apparent as the quarantine period increases. The community's vulnerability becomes more evident as the time of isolation increases, such as overcrowding of public space, exposure of security risks, intensification of community conflicts, and confusion in resource allocation. The causes of this vulnerability can be divided into historical and empirical factors. In the early days, the state had a loose economic policy to achieve the goal of urbanization quickly, which led to the formation of many crude communities for commercial interests, leaving behind problems such as unreasonable planning, serious homogenization, and widespread illegal construction. In addition, the country is in a state of "practice while learning" in the fight against the epidemic, and it is difficult to achieve "all-around" strategic deployment. In the long run, the physical environment will be damaged, and the social environment will be disrupted. During the 14th Five-Year Plan period, China's residential housing will make full use of public resources to promote the pace of urban renewal, and resilient communities appeared in the public eye at this time. Therefore, how to grasp the policy opportunity in the post-epidemic era and use the transformation of public space resources to adapt to the residents' normalized and diversified living patterns and occasional public events defense patterns to enhance the community environment and residents' psychological resilience level is an important issue today.

After collecting and reading related literature, it is found that there is a lack of methods and concrete practices for environmental remediation and spiritual healing in post-disaster communities when dealing with community problems. Therefore, this paper analyzes the components of public space and individual mental resilience by understanding the characteristics of resilient communities and compares them with the state of old communities under the epidemic quarantine system in Shanghai, to summarize the shortcomings and directions for improving the current state of old communities. Finally, the author simulates the different usage scenarios of the public space after the renovation by designing a "symbiosis station" in Shanghai Hongqiao Airport New Village.

1.2 Resilience Theory

1.2.1 Origin of the Concept of Resilience

The term "resilience" is derived from the Latin term "Resilio," which refers to a system's ability to adapt to change and survive [1]. This term was initially used in engineering to refer to the return of a system to its original state after it has been damaged. Subsequently, the term has been extended to ecology, emphasizing "dynamic equilibrium", which refers to the process of system-level turnover in which an ecosystem reaches a more stable equilibrium than before when it is disturbed by external disturbances. The term "resilience" was first used to describe social systems in 1990, and it relates to how local social resources may be used by citizens to rebuild their sense of community and capacity to survive when a city's functionality is harmed by natural catastrophes. Furthermore, the notion of resilience has been extended to economics and psychology, and its fundamental lineage is examined in
terms of "how to adapt to change." It can be observed from the history of the idea of "resilience" from engineering to many fields that resilience cognition progressively grows from a single equilibrium state to numerous equilibrium states, and the resilience system gradually transforms from simple to complex.

This research focuses on social-ecological resilience, which blends psychology and ecology in the context of community rejuvenation, emphasizing the interrelationships between disruptions and reorganizations within and beyond the community. The "minimum operational ability" of the community will be strengthened to build a more stable community state through mutual learning and innovation amongst internal systems. To guarantee that the community has more robust adaptability to continue fundamental living operations in the face of negative developments.

1.2.2 The Current State of Development of Resilient Community Theory

Since the 21st century, various natural and economic disasters have frequently occurred worldwide. As the most complex ecological and social system, cities are prone to form a chain reaction in the face of sudden disasters. Therefore, scholars have started to pay attention to the concept of resilient cities and apply the "defense-absorption-learning-growth" model of resilience theory to urban governance in order to achieve dynamic and multiple equilibrium states. As one of the essential carriers of urban industries and population, the community is an important medium linking different organizational modules of the city and is the primary object of research in resilient city systems.

Most scholars summarize community resilience as one or several capacities or processes, while others view it as the result of capacity acquisition or successful adaptation, both as a collection of capacities and as a process of community capacity enhancement and disaster adaptation [2]. This research focuses on community resilience as an expression of the ability to cope with social change. This capacity has four main characteristics:

**Self-Control.** Refers to a community system's capacity to withstand calamities and continue to carry out its fundamental duties in the face of extreme trauma and upheaval.

**Self-Recovery.** Refers to the return to standard capacity after disruption of community function.

**Self-Organization.** Refers to the connection and interaction between the various systems of the community so that when a single or local system is damaged, system reorganization and resource deployment can be carried out quickly to fill the system gap promptly.

**Self-Adaptive.** Refers to the community's ability to learn and build new systems to adapt to a new social environment.
1.2.3 Components of personal resilience

COVID-19 has put an unprecedented strain on all in society. It has caused problems such as widespread unemployment and life status changes that continue draining individuals of their internal resources. The American Psychological Association (APA) believes that individual resilience requires adjustment through mental, emotional, and behavioral resilience and internal and external demands. The most critical factors to enhance personal resilience can be divided into three points. The author will elaborate on them in relation to the state of the residents during the epidemic.

Correct Values and Ways to Interact With the Community. COVID-19 is a constant and ever-changing battle. As the largest group of residents with the least amount of medical resources and information, they are prone to negativity and anxiety and vent these emotions to their families or other surrounding groups, which can undermine the stability of community relationships and make community management difficult. Therefore, residents need to correctly view the policies and measures implemented by the state and the community during community isolation, maintain timely and effective information and communication with the community, and actively participate in health education presentations and other participatory activities organized by the community. At the same time, they need to accept and use the ecological dispersal of people, reach out to diverse communities, and keep their social groups dispersed and mixed rather than fixed.

Available Social Resources. An individual's social resources are generally divided into tangible resources, such as material and financial resources, and intangible resources, such as knowledge, social relationships, and technology [3]. The richer the variety of social resources an individual has, the more channels they have to drain their emotions and learn to absorb them, and the stronger their psychological resilience. However, many tangible resources are in a passive state of depletion during quarantine, so it is essential to promote mutually trusting social networks, foster social relationship leadership, cultivate more interests, and form multiple interest groups to increase new social resources.
Innovative Solutions. An individual's resilience is variable and constrained. An individual's potential for resilience will temporarily increase when they experience abrupt environmental changes. However, when the stress of change intensifies over time, the body's tolerance level drops to zero, causing the body's mental and physical health to be compromised or leading to a stress disorder. Every home and community becomes an island while under quarantine. When residents' behavior and social interactions are restricted, they must look into more diverse stress-relieving strategies, such as setting short-term goals that are doable and feeling proud of themselves after they are accomplished. Alternately, volunteer in the community or manage a facility to aid others while fostering interpersonal relationships and self-worth. Or ask others for assistance. When people are stressed, receiving the correct service from the outside world can be extremely important for developing personal resilience.

1.2.4 Components of Community Public Space Resilience

Community public spaces are areas that promote goodwill, mitigate the effects of disasters, and improve quality of life. The way public spaces are created, managed and used reflects a place's culture, structure, and social hierarchy, highlighting the significance of a positive public image and a welcoming social climate for preserving and improving community resilience. The attributes of the community itself determine the resilience characteristics of public space [4]. The spatial pattern and environmental composition in a community reflect the community's resilience, and its main components are the integrity of infrastructure, the diversity of spaces and the flexibility of functions.

Integrity of Infrastructure. Infrastructure typically encompasses both public and social facilities, such as those related to education, research and technology, and health care, as well as public facilities like the power system, communications, and water supply [5]. These facilities are necessary for the community's healthy functioning, ensuring residents' basic safety and convenience. In times of community change, they respond, recover, and learn to restore the functioning of the community's public spaces. However, the physical and geographical layout, the economy, and a sensible management system all play a role in infrastructure improvement, and their interdependence impacts and regulates one another. Infrastructure must be customized to the local geographic, political, and cultural contexts and requires long-term consultation and planning.

Diversity of Space. First and foremost, the term "diversity of space" refers to the range of spatial uses, such as cultural centers and leisure areas, which give locals a variety of outdoor experiences, improve the standard of community life, and fortify social networks. Second, it refers to community ecological variety, which upholds and safeguards local species, fosters beneficial interspecies connections, and establishes a positive cycle of resource and energy efficiency. Ecological diversity enhances both community ecology and resident spirits. It also refers to several activity patterns that can produce a range of group activities based on different community conditions to generate a warm and welcoming community culture that can aid locals in banding together as a solid force to fight against calamities.

Flexibility of functions. The community must be able to adapt swiftly to unforeseen circumstances and return to a stable state. This means that the layout, structure, and connection of the environment's facilities and spaces must be able to respond to a variety of community scenarios and take into account the needs of ordinary living and emergencies. The environment's flexibility also gives time and avenues for people's mental and life rehabilitation following a traumatic event. The environment's flexibility necessitates taking
full use of the community's regional and geographical characteristics, such as employing some roads as epidemic-proof corridors during community quarantine to improve the safety of material transit and everyday mobility. It also necessitates the participation of community organizations that can arrange for specific personnel to maintain equipment and facilities in the new environment or host events such as awareness sessions and relief meetings to help residents comprehend the changes and facilitate their adaptation.

2 Status of Shanghai's Old Communities During the Epidemic

In reaction to a sudden and enormous Omicron infection in the spring of 2022, Shanghai adopted a comprehensive process of static management, and the city's production and life entered an unconventional condition. The government has created a grid-based community management system that separates areas with varying degrees of infection into "containment," "control," and "prevention" zones in order to meet the objective of lowering the number of infected individuals as quickly as feasible. The prompt community reaction in Shanghai avoided a mass infection, but new positive infections continue to emerge in stages, and most affected individuals reside in older areas. The Shanghai CDC analyzed that one of the reasons for this is the weak health and safety of older communities. There are more difficult aspects that can easily spread the virus, such as high population density, poor sanitary conditions, and common sharing of toilets and kitchens. This situation shows that the current old communities are still some distance away from a high level of resilience.

2.1 The State of Community Public Space Use During the Epidemic

The community public space mainly takes on the functions of material transportation and distribution, Covid-19 testing, and temporary tent construction during the quarantine period. However, the inherent backwardness of hardware conditions in old communities leads to ineffective epidemic prevention, such as inefficient resource allocation due to congested roads and a high risk of cross-infection in residents' lives. Moreover, most public facilities are single-functional and in poor condition, and lack of ecological environment such as green landscape space, making residents lose the desire to move around in public space. In addition, dirty and poor public hygiene conditions make it more difficult to eliminate viruses. At the same time, it is easy to breed other bacteria, viruses or harmful insects, which can damage the ecological environment of the community.

2.2 Resident Life Patterns and Mental Model States

Due to the quarantine policy, residents' movement is restricted to the community, they rely on the Internet for work and education, and the lack of space in older communities to meet their spatial needs has resulted in widespread physical health problems due to lack of exercise and a significantly higher incidence of mental health than before the epidemic. The extended recurrence of the pandemic in Shanghai, accompanied by isolated breakouts and a great deal of incorrect information, caused inhabitants' emotions to fluctuate and made it easier for resentment to collect. Even in the post-epidemic period, it will take time for such emotions to heal.

2.3 The State of the Community Management Model

To decrease the danger of viral transmission and secondary infection, the community rigorously regulates the flow of persons entering and exiting the gate, and all people and goods entering and exiting the community must pass covid-19 testing and virus disinfection.
Additionally, the community must manage the social distance between individuals and document its members’ daily health conditions and test results. The low rents in remote and old communities have gathered many migrant workers. For this reason, the phenomenon of multiple households in one room is common, which makes it difficult to record information and distribute supplies to the residents. In addition, the ageing problem in older communities is serious, and emergency medical care, rigid medication dispensing, life care and other livelihood protection are restricted during the epidemic, thus affecting the health and safety of the elderly.

3 Strategies for Improving Public Space in Old Communities

Based on the above analysis, it can be stated that the ancient difficulties of the existing old communities are incompatible with current public living circumstances and are incapable of protecting the inhabitants’ health in the case of an epidemic. The renovation of public space should prioritize the dynamic living patterns of inhabitants in various circumstances and align space functions with the features of resilient communities. Therefore, the author recommends a "symbiosis station" strategy. The "symbiosis station" is a service location that meets the needs of different groups of residents for living, socializing, and recreation in normal life, as well as the needs of community members for health, safety, and efficiency in episodic community quarantine, by transforming the functions of spaces or devices within the station, and must have the following three characteristics.

3.1 Space Layout with Security and Openness

Safety and transparency are the first fundamental components of a "symbiosis station" and the need to gain people's trust. Regarding space layout, it is vital to comply with public space construction rules and maintain an adequate buffer and transition space to guarantee that inhabitants may escape or receive aid in crises promptly and with appropriate space. There needs to be enough openness and inclusiveness in the visualization and usage of the space so that residents can easily understand the operation mode of the space and integrate quickly.

3.2 Space Facilities with Multiple Attributes and Flexibility

The premise of restricted public space necessitates facilities with composite multifunctional characteristics to meet the demands of inhabitants of all ages. The conditions of daily life and communal quarantine are radically dissimilar. When an incident happens, the community must quickly complete the strategic deployment of epidemic preventive measures. Therefore, public facilities should avoid functional homogeneity and be easily dismantled and reassembled to accommodate new applications.

3.3 Usage Patterns with Participation and Cooperation

By organizing participatory community activities, we create channels for different communities to communicate and express their perspectives, rationalize the use of space, build mutual trust through cooperation and mutual assistance, and reduce the negative emotions resulting from neighbourhood conflicts. During the duration of quarantine, the majority of inhabitants are anxious and despondent. Involving people in activities and works linked to epidemic prevention can decrease the burden on community personnel, alleviate the agony of residents at home under quarantine, and increase understanding of their psychological needs.
4 "Symbiosis Station" Design Research in Shanghai Hongqiao Airport New Village

4.1 Basic Information of New Village

The "Symbiosis Station" design firm is located in Hongqiao Airport New Village in Shanghai's Changning District, next to Shanghai Hongqiao International Airport. As the welfare housing of China Eastern Airlines, Shanghai Airport, and the Aviation Administration in the early years, Hongqiao Airport New Village is the home of the old generation of aviation people, carries many memories and stories and remains the place where a large number of aviation employees live and work. Hongqiao Airport New Village's culture has become even more diverse due to the gradual influx of inhabitants from various social backgrounds as Shanghai's economy has grown.

Hongqiao Airport New Village has a complete set of basic services. However, after questionnaires, interviews, and site visits, we found that with the development of the community and the movement of people, Hongqiao Airport New Village still has problems such as limited space, uneven distribution of resources, the gradual disappearance of community culture, serious xenophobia of residents, and conflicts caused by differences in residents' ideology. After consultation with the community council, we chose a site in the new village square and the surrounding unused space. The site is located in the centre of the new village, with the community council office to the north, the lotus pond park to the south, and the new village shopping street to the east, which has a high flow of people and is suitable as a practice site for the "Symbiosis Station".

![Figure 2: Original photos of the site](image)

4.2 Requirement analysis of "Symbiosis Station"

To make the "symbiosis station" suitable for residents of all identities and ages, we divided the residents into elderly, tenants, parent-child families and community workers and selected one representative member from each of these four groups to analyze their behaviour patterns and preferences. This was used as a reference for the spatial function and route division of the "symbiosis station". The following are the results of the research on the four representatives.

Ms Wang represents young renters who have recently moved into the new community. This group is sociable, imaginative, interested in various topics, and privacy sensitive. However, they are often unfamiliar with the community and do not engage in or comprehend the group activities or resident meetings. Since there are no entertainment facilities or places for young people in the new hamlet, they do not spend a long time in public areas. Throughout the quarantine, she has been working from home.

Mr Chen currently works at Hongqiao Airport and has resided in New Village for several years. In New Village, he represents a parent-child family. This group has a strong emotional connection to the community, and their everyday behaviour in the community consists of accompanying their children to entertainment events and taking part in community activities. Current recommendations for the new village include enhancing environmental health, reviving its original aviation culture, and fostering positive relationships among various...
community groups. Work was halted during the quarantine period so that he could spend more time with his family.

Mr Lin represents the first residents and is among those who moved in at the commencement of the new village's building. Due to the surge of new residents, many acquaintances and colleagues have departed the new village. This group of residents has become unknown and isolated due to the drastic changes. This group lived mostly in the new village and its neighbouring streets, and their daily interests and pastimes consisted primarily of sports, chess, and gardening. During the quarantine period, most information and messages were provided online. The inability of most elderly to operate cell phones made it difficult to adapt to life in quarantine.

Mr Wu represents the community workers who comprehend the new village's history, culture, and community relations. During the quarantine, he was largely responsible for providing supplies and doing covid-19 testing. In order to prevent cross-infection with residents, community workers were compelled to reside in community councils or other temporary facilities, which diminished the quality of life for many community workers. In addition, the dispersed storage sites and limited room for Covid-19 testing reduced their efficiency.

4.3 Design Analysis of "Symbiosis Station"

As a consequence of the above analysis, the "symbiosis station" should serve as a venue for cultural and educational output and a location for inhabitants of all ages to mingle and enjoy themselves. During the quarantine period, it is necessary to change the function of the scene into a stockpile of epidemic prevention materials, information displays, covid-19 testing points and other disease consultation points. Therefore, a community museum, a 24-hour convenience store, a shared recreation room, a community plaza and a co-creation garden have been set up in the "symbiosis station" design. The aviation theme culture was first refined in the renovation, and the questionnaire survey and residents' participation workshop were conducted in "Your Heart's Airport New Village Public Space". Extract the keywords of "airplane", "runway", "blue", "warm" and "open". Based on the above information, specific design analysis of these five places is carried out.

**Figure 3: Axonometric view of Symbiosis Station**

**Community Museum.** The community museum is a cultural and educational institution for children and adults. The rehabilitation of the community museum includes the renovation of the exterior, the design of the internal display, and the design of the outdoor activity space.
The renovation of the community museum is comprised of three distinct phases: façade renovation, interior display design, and outdoor activity area design. The outer facade is built with a slanted roof and parametric partitions to enhance the dynamic aesthetics of the building, followed by a blue-grey and white exterior color scheme. The museum's interior consists of a foyer, creative space, activity area, screening room, and temporary studio. Except for the creative space, the remaining space is flexible for future museum operations. The community council and residents contribute most of the exhibition's materials and displays. The outside space of the museum is outfitted with some movable trolleys for museum-themed programs and activities. During the quarantine period, the museum's interior can be converted into a storage space for materials, the facade display area can be used as a public display area for the epidemic, and the museum's outdoor space can be used for covid-19 inspection and registration.

![Figure 4: Rendering of the community museum in usual life](image)

**24-hour Convenience Store.** In addition to selling items and providing food, the 24-hour convenience shop offers spiritual solace for airport workers and other people who are off duty at night. Convenience shops may attract community members by offering the correct combination of food and subsidies for the elderly, therefore enhancing opportunities for intercommunity dialogue and community employment. Modular furniture that can be moved and quickly dismantled can be utilized to boost the flexibility and diversity of the space, such as dining tables and chairs that can be changed into beds and used as a community break room for out-stationed workers during community quarantine. Convenience shops can also provide healthy takeout options for employees and individuals without cooking equipment or abilities.

![Figure 5: The rendering of 24-hour convenience store in usual life and during quarantine](image)
Shared Recreation Room. Based on research into the interests of residents, the shared recreation rooms may serve as a movie screening room, a sports room, and a shared office to enhance the recreational life of residents. Due to the need to control the number of people and time of crowd gatherings during the quarantine period, these three spaces can be converted into medical consultation rooms, temporary patient observation rooms, and medical staff studios to ensure that residents receive prompt medical care in the event of sudden physical or mental illness.

Figure 6: The rendering of shared recreation rooms in usual life and during quarantine

Community Plaza. The community plaza originally consisted of a simple lectern and a resting pavilion. Consequently, this makeover built one primary square and two minor squares based on the mobility and gathering spots of the people and distinguished them with distinct shades of blue plastic flooring. In addition, inhabitants can self-assemble a range of functional furniture, such as market booths, children's amusement facilities, and leisure chairs, to support a variety of thematic activities or everyday enjoyment. During the duration of quarantine, the modular modules can also serve as temporary covid-19 detection locations.

Figure 7: The rendering of community plaza in usual life and during quarantine

Co-creation Garden. The Co-Creation Garden is situated on the upper level of the communal recreation room, with a stairway separating the various planting spaces and aisles. Daily, the garden is available for individuals interested in growing vegetables or flowers and for youngsters to learn about plants and gardening. The benefits of this function include the formation of healthy farming products with community characteristics for self-production and self-marketing within and outside the community; the enhancement of the community ecological environment while promoting neighbourhood interaction and fostering a greater
sense of community identity and belonging; and food education that fosters children's responsibility to protect the environment and value food. During the quarantine period, the communal garden may replenish the community's food supply and guarantee that people have appropriate daily food reserves.

![Figure 8: The rendering of Co-Creation Garden in usual life](image)

5 Conclusion

Although the covid-19 epidemic is now sporadically breaking out in the country, it still affects people's daily behaviour and psychological and emotional well-being. As a mass gathering unit, the community must resist all kinds of social changes that are harmful to the healthy lives of the residents and guide them to grow together with mutual trust. As a practical example of promoting the development of human and environmental resilience in the context of reforming old communities in the post-epidemic era, the "Symbiosis Station" promotes the relationship between people, the environment and the environment by building different interactive places, adaptive facilities and participatory activities to meet the diverse needs of community residents and occasional major public health events. Ultimately, a set of community cultural environment optimization methods compatible with cultural atmosphere, innovative ideas, sentiment cohesion, tolerance, and openness are established to promote a sense of humanism and collaborative governance in community members and the general public.
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Design for Outdoor Education: Redefining Schooling Through Design-Oriented Experimentation in Outdoor Contexts

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Abstract
In the redefinition of the world's equilibrium in the post-pandemic context, it has become increasingly necessary to invest in the search for alternative or improved design systems of the educational experience with respect to remote learning. In the near future, therefore, innovative pedagogical practices oriented towards sustainability and safety, such as Outdoor Education - aimed at making outdoor space an educational environment - could meet the new needs for revision and redesign of educational experiences. Starting from this premise, the contribution intends to report the results of a research project financed by the funds for the Research of the Sapienza University of Rome and carried out in collaboration with the "Bosco Caffarella" outdoor kindergarten in Rome, Italy, which is currently being tested. By setting up a network of interdisciplinary cultural exchange between Design and Pedagogy, the research project set out to undertake an action-research path for the design of design-oriented educational actions and tools aimed at children in the 3–6-year age range. Using a wide range of methodologies from Design Thinking and User-centered Design, such as Double Diamond, Context Inquiry and UX Analysis, it is being possible to produce an effective output in terms of usability, design and pedagogical impact. The objective of this experimentation is to propose a reinterpretation of the use of educational services and to provide a first demonstration of how this disciplinary intersection would make it possible to facilitate the transmission of cultural values, catalyse knowledge, foster creativity or convey messages and emotional responses.

Keywords: Design for Education, Outdoor Education, User-Centered Design, Action Research, Interdisciplinarity
Introduction

The research presented in this contribution stems from the lockdown period linked to the COVID-19 pandemic. In this context the world of School had to rapidly adapt to a dematerialisation of classrooms, which soon became places of a digital city (Belluzzi Mus et alii, 2021), symbolising the possibilities of a digitalised and multimedia pedagogy, but also of the social criticalities that may arise from the transfer of educational services to a virtual and connected reality. Adapting to this new normal spaces, it was increasingly clear that, in a post-pandemic world, Schools’ biggest constraints would have been their own walls (Stolzoff, 2020).

Starting from this experience, therefore, new needs have emerged for the revision and redesigning of educational experiences (MIUR, 2021) in the near future, as well as a strong need to invest in the research of design systems for the educational experience (Di Michele, 2021) that can be alternative or better than Distance Learning.

The contemporary schooling system, inserted in the post-pandemic context and therefore in continuous expansion with respect to methodologies, teachings and experiences, would require an interdisciplinary approach in its rethinking. Interdisciplinarity, in fact, by its very nature is an essential element for the co-construction of complex knowledge (De Vitis, 2020) and would therefore favour a balancing of the parameters of multimedia, inclusiveness, safety and well-being required by the system in favour of a qualitative as well as quantitative growth of the languages of the School.

A possible vision, inserted in this paradigm of change, implies an implementation of services, spaces and learning tools through a design-driven approach, which premises the design of the educational experience on a careful analysis of the users, of the context to which it is addressed.

The following paragraphs, therefore, will describe a case study linked to the above-mentioned vision: a research and experimentation pathway, currently underway, linked to the identification of the role of the designer as well as of the project culture within the design of the learning systems belonging to one of the most forward-looking scenarios - albeit diverging from the digital model - of the post-pandemic School: Outdoor Learning, also known as Outdoor Education.

In particular, a first part of the contribution will highlight the intrinsic relationship between Design and Pedagogy, as well as the relevant features and reasons why Forest Schools today constitute an interesting opportunity for design-driven innovation, especially in Italy. Secondly, a practical example will be outlined of how, in this context, the methodologies linked to Design Thinking and User-Centred Design, in synergy with the main pedagogical methodologies in use today in Outdoor Learning, can provide an enhancing boost to the self-designing processes of scholastic activities and to the learning of soft-skills linked to the educational objectives of pre-schools.

Outdoor Learning: overview e prospettive Design-oriented

Born in Germany and widely diffused in the Northern European area already for over 50 years, Outdoor Education, intended as a praxis of assuming the outdoor environment as an educational environment (Farnè, 2014) privileged and of important pedagogical relevance
(Guerra, 2015), today continues to exponentially influence European pedagogical currents, also directing several Outdoor Education experiences even on the national territory.

From a pedagogical point of view, Outdoor Education has its roots in hands-on learning practices - defined by Dewey as learning-by-doing - for the development of children, particularly in the 0-6 age group. The project and workshop aspect inherent to active pedagogy constitutes the first of the reasons why Design, or rather, the Project culture, can find an effective and improving role in the design of Outdoor Educational experiences. This affinity between Design and learning had already been pointed out in the famous work of Bruno Munari and Maria Montessori, pioneers with respect to the idea of building an interdisciplinary exchange between School and Design for an education based on tactile workshops (Munari, 1985) on problem solving and on teaching beauty, freedom and practicality.

In those years, there was still no mention of Forest Schools, although they both recognised a key role of nature in the free growth of the child, however, the existence and knowledge of a consistent state of the art, coupled with the observation of an ongoing process of innovation and dissemination of nature-based pedagogical experiences constitutes the second and crucial trigger for the initiation of a critical and experimental discussion on the recovery, identification and redefinition of the role of designers and design practice (Camuffo & Dalla Mura, 2017) in schools of the near future. Many have been, in recent years, the interventions of architects and interior designers in the conscious design of traditional or experimental school spaces, however the contribution intends to shift the focus to another operational field of design, even closer to what Munari and Montessori theorised and realised. Despite the fact that even the natural context is a fertile ground for the construction of stimulating learning environments (Bortolotti, Schenetti & Telese, 2020), in actual fact, an innovative research should extend its boundaries towards the experimentation of the coexistence of Experimental Pedagogy and Product and Service Design skills and knowledge, a coexistence that would allow not only to develop "objects for learning", but also to carry out a methodological transfer that nourishes and renews the Design culture of school didactics (Weyland, 2017).

In Italy, the territory addressed by this study, it is possible to observe how universities, such as the University of Bolzano, have already turned their gaze to this type of innovative interdisciplinary systems for product and experience design, the laboratories, exhibitions and publications pertaining to the EDES project are a relevant case study in the study of tools and workshops for design-oriented schools, as are the activities of the Reggio Children association in Reggio Emilia, which is part of the Loris Malaguzzi experimental centre. However, the natural context and the unstructured materials connected to it find marginal space and are not always investigated in design terms.

Design for Outdoor Education, indeed, remains unexplored ground, especially from a scientific and evaluative point of view. The contribution, highly original in this sense, through a case study, intends to bring to light how the intervention of the designer in the Design of the outdoor experience can help educators and children to manage the context with its complexity and multiplicity of problems (Dozza & Cardinaletti, 2022) contributing to the development of a practice that "helps to cultivate an attitude of responsibility towards the environment that will last a lifetime" (Charles, 2015).
Design for Outdoor Education: an experience in Rome

The case study that is the purpose of the contribution is a research and experimentation project financed by the University funds for the Avvio alla Ricerca 2021 of Sapienza University of Rome, entitled "Outdoor Education and Design: analysis and experimentation of the contribution of Design to experimental Outdoor Education. Between post-pandemic scenarios and sustainable education'. The project envisages a substantial action-research phase, carried out at the "Bosco Caffarella" kindergarten in Rome, led by PhD student Carlotta Belluzzi Mus under the supervision of Dr. Francesca Lepori, coordinator of the Asilo nel Bosco.

For a better understanding of the activities and outputs related to the project, the objectives of the research can be summarised in three main points:

1. Research into the role of interdisciplinarity in the Preschool system

The first objective that was set, which is broader in scope than the following ones that will narrow the field of investigation incrementally, was to identify a strategic and operational role in the design processes and activities relating to the Infant-toddler Centres. In this sense, since these contexts are linked to the institutional system of the Ministry of Education, it was appropriate to focus on the Italian territory as the main scope of the research itself, since the regulations are different from the international school system.

2. Research into the benefits and possibilities of the designer's intervention in the design of educational experiences in Outdoor Learning

Going into greater detail, the research intends, once the role of Design in the general Italian school system has been identified, to focus attention on the outdoor context, going on to research any specific benefits of the hybridisation between the pedagogical methodologies currently used and the culture of design. This objective also stems from the reflection that a context rich in natural and unstructured materials can benefit a variety of activities if assisted by conscious and creative design.

3. Research into the efficiency of a design-oriented approach with respect to the development of specific skills in a school context

Lastly, the research aims to verify, and possibly assess, whether and to what extent the collaboration of a designer in the conception of activities and tools for Outdoor Education can increase the development of those problem solving and creative thinking skills typical of Design and included among the skills to be developed in the Early Childhood School curriculum. In addition, the hypothesis added to this objective is that a more structured attitude towards problem solving and divergent thinking could be a relevant contribution to the management of the complexity of the context for both children and teachers, as already pointed out in the previous paragraph.

To achieve these objectives, the research followed a progressive approach from Desk Research to Action Research. In particular, during the Action Research phase, the methodologies belonging to User Experience Design and User-Centred Design were experimented in order to identify key points and opportunities for intervention for the development of an efficient and specific design output for the context and target of use. The
entire project refers to Design Thinking and the Double Diamond model (British Design Council, 2005) in the sequence of sequential phases to be followed. Starting from this methodological framework, the two macro-phases, respectively of research and project, made use of resources pertaining to the discipline of Design and Pedagogy in order to achieve the desired results. In the first exploratory moments of the Action-Research, for example, specific tools of user observation and analysis, such as the Contextual Inquiry, the Interviews to the teachers and operators of the Forest School, and the Photojournaling allowed a profiling of the activities, actors and scenario with respect to the current state. The observation of this documentation allows to deduce preliminary answers to the research demands; in particular, the dialogue with the teachers and the direct observation of the proposed activities, such as the construction of tactile postcards, pathways and colour wheel exercises, demonstrate an embedded presence of the project's subject matter in the programme proposed to the children relating to nature pedagogy. Not only that, as there are no structured materials and classrooms in which to carry out guided activities, the tools used for play and study moments often turn out to be the result of self-design on the part of the kindergarten teachers and operators; this observation lays solid foundations for validating the hypothesis that awareness introduced by a designer could increase the effectiveness of the tools used.

Figure 1: Exploring and searching treasures in Bosco Caffarella
At the end of the first research phase, therefore, considering the results of the Desk research and the context analysis, it was possible to have feedback regarding the possibility of establishing a process synergy between designers and schools, even more so where the design aspect is already present and rooted in the behaviour of pupils and educators, as in the case of Outdoor Learning; this first conclusion constitutes the starting point for the product design phase, aimed at responding to the third objective of the research, i.e. to demonstrate and evaluate the effectiveness of the design-driven approach in the design of context-specific tools for Forest Schools.

In this last phase just described, and as of today in progress, the research envisages a strong interdisciplinary approach aimed at the exchange of knowledge and methodologies useful for the development of the final output, consisting of a design-oriented tool for carrying out one of the activities proposed by the Bosco Caffarella kindergarten. In particular, through a Co-Design process punctuated by Brainstorming and Nominal Groups activities, it is intended to proceed operationally by structuring the product starting from the analysis of the users, carried out through the construction of Personas, and then to design an experience on the basis of some application theories belonging to the world of Active Pedagogy and of a laboratory type, such as the methods proposed by Maria Montessori, Waldorf and Loris Malaguzzi (Reggio Emilia Approach).
The following section will describe the output and the application strategy of the methodologies just listed, as well as the validation and experimentation method of the product itself.

**Materials, Tinkering and Storytelling: the research output**

As mentioned above, the briefing on the experimentation of a design output began in the Contextual Inquiry and Interview phase, during which two activities seemed particularly suited to a design-based intervention: searching and storytelling. The activities of the kindergarten in the wood under investigation, in fact, are divided according to a well-defined temporal scheme: in the morning the children are invited to engage in free and exploratory activities, in the afternoon to carry out structured, choral and more static activities. It could be said that in the morning, multisensory inputs, notions and materials are gathered, which in the afternoon are translated into a natural interpretation of the activities proposed by the traditional school. As semi-rigid as this scheme appears, the resulting experience is always different, just because it is the context itself that varies according to seasonality, weather and its own complexity. In observing how this variability is handled by pupils and teachers, two spontaneous behaviours have emerged that are relevant to the project: the collection of materials, natural or otherwise, found during the exploratory phases and the retrospective telling of a story born from the association of these materials with more rational or creative thoughts.

Although these experiences are repeated and provide a pretext for learning concepts and soft skills fundamental to the development of children in the 3-6 year age group, they lack a structured methodology and a collection of outputs useful both for documentation by teachers and for extending the activities over several days. Through knowledge of the mechanisms of storytelling, a design-oriented project could in fact guide the children in the choral construction of a story that stems from the collection of "treasures", inserting a workshop activity capable of making the children learn fundamental concepts through play, as well as facilitating the archiving of the activities carried out by the school operators.

For these reasons, following the initial brainstorming activities, it was decided to structure the output to be experimented with as a box for sorting the materials collected during the exploration of the park. Each section of the box will correspond to an element of the story to be created and will be destined in part to fictional elements, impersonated precisely by the treasures collected (e.g. a rock in the shape of a ladybird, a leaf that becomes a tree, etc.), and in part to structured materials designed to complete the storytelling context (e.g. scenarios, emotions, etc.). In fact, the product design, colours, shapes, images, and graphic elements are all elements with which the designer can guide the child towards more attentive or freer actions (Lupton, 2017). To this concept of Design for Storytelling, through the use of the tool is added the practice of Tinker Boxes, sorting boxes for hands-on exercises akin to Montessori-Waldorf theories for the development of problem solving and organisation skills. Tinkering is in fact defined as a spiral process consisting of five steps: imagine, create, share, reflect (Resnick & Rosenbaum, 2013). This 'tidy imagination' exercise should therefore offer a tool to carry out a structured activity from unstructured materials, enhancing the experience through the ability to reflect through the story on intangible concepts such as the relationship between the self and the other, the distinction of emotions and the ability to tie them to a context, rather than an action.
Following the prototyping of the box, which is now in progress, the intention is to test the tool by administering it during the afternoon activities to a sample equal to half the class group; the other half will perform the storytelling activities freely, as in the state of the art.

An evaluation of the usability on the part of the educators and the children, as well as the effectiveness in facilitating the construction of the storytelling and learning, will be collected via an evaluation grid produced ad hoc by the Nominal Group. In this sense, the evaluation is also intended to be interdisciplinary, in order to better validate the hypotheses underlying the entire research. What is expected is to provide not only a new tool to the community of teachers of the Outdoor School, but also a scientific and consultable feedback of the value of the interdisciplinarity between Design and Experimental Pedagogy.

Conclusion

In conclusion, already from an initial on-site research phase, it was possible to observe the presence of an unmet need to manage the complexity of the context and the conscious conception of activities based on unstructured materials. In these terms, as described, it became evident how the designer can therefore find a leading role in the design of the tools, as well as of the experience, offering a significant contribution that can benefit in usability, versatility and beauty of the products and activities themselves, three fundamental parameters for enhancing learning in pre-school children. Not only that, the methodological affinity between the pedagogical theories underlying Outdoor Learning and Design constitute a facilitator and stimulus in the act of knowledge transfer and construction of the interdisciplinary collaboration network; this operational facility responds to the research question concerning the investigation of a possibility of design-driven innovation in Forest Schools, confirming not only its applicability, but also its validity in terms of results. Being a work in progress, it is not possible to draw conclusions regarding the success of the interdisciplinary work, however, the experimentation of the co-designed tools will be able to validate the actual effectiveness of the Design intervention with respect to the Outdoor Learning experiences, achieving the specific objectives set by the research. In this sense, given the premises on the theoretical level and the positive feedback obtained in the first research phases, a result of effectiveness and validity of the product is to be considered very likely.
Once the experimentation is complete, the dissemination of the results will give the project futurity, projecting it towards standardisation to be applied in similar contexts on a national and international scale. For a conscious, sustainable and futuristic design of the education of tomorrow's children.
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Using the ‘Candle in the Tomb’ Fandom as an Example and Explain Its Associated Behaviours and Values

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Abstract
In recent years, IP films and their fans have received increasing attention. Every film adaptation of an IP work has fans' support, which actively spreads information. Fans have created their own discourse space in virtual communities, producing a reasonably close-knit social group, thanks to the development of mobile internet technology and the relative democratisation of information. Candle in the Tomb, One of China's most iconic internet adaptations, has been a massive hit with fans since its release. From the film adaptation to its dissemination, Candle in the Tomb's fan base has contributed significantly, presenting a powerfully productive and creative force. This paper will analyse film fans in three main parts: the generation of film fans, film fans' behaviour, and fans' values. Firstly, by analysing the generation of the film's fans, we can understand how Candle in the Tomb resonates with its fans and its impact on them. Secondly, the analysis of film fan behaviour allows further exploration of how films interact with fans and the significance of film fans' behaviour. Finally, through an analysis of fan values, the relationship between fans and the constructed film text is explored to summarise the deeper meanings between film and fans.

Keywords: Candle in the Tomb, Fandom, IP Film
Introduction

In recent years, IP films and their fans have received increasing attention. Every film adaptation of an IP work has fans' support, which actively spreads information. Fans have created their own discourse space in virtual communities, producing a reasonably close-knit social group, thanks to the development of mobile internet technology and the relative democratisation of information (Guo, 2017). Under the Internet environment, fan groups are progressively becoming "consumers of production, disseminators of consumption, and producers of communication" in all phases of production, dissemination, and consumption (Yan & Lee). Candle in the Tomb, One of China's most iconic internet adaptations, has been a massive hit with fans since its release. From the film adaptation to its dissemination, Candle in the Tomb's fan base has contributed significantly, presenting a powerfully productive and creative force. Fans of Candle in the Tomb as an online adaptation have emerged and grown from internet platforms and multiple social media connections and have become an inevitable and negligible sample of the community. This paper will explore the behaviours and values displayed by Candle in the Tomb fans, using literature research and case studies. This paper will analyse film fans in three main parts: the generation of film fans, film fans' behaviour, and fans' values. Firstly, by analysing the generation of the film's fans, we can understand how Candle in the Tomb resonates with its fans and its impact on them. Secondly, the analysis of film fan behaviour allows further exploration of how films interact with fans and the significance of film fans' behaviour. Finally, through an analysis of fan values, the relationship between fans and the constructed film text is explored to summarise the deeper meanings between film and fans.

The impact of Candle in the Tomb on fan generation

IP is short for Intellectual Property and refers to innovative products with intellectual property rights, and IP films are adaptations of copyrighted creative works (Gong & Huang, 2017). Based on the online novel of the same name, the Candle in the Tomb (Pinyin: Gui Chuideng) has gained a huge fan following since its release. One of the most significant features of its fandom as an IP adaptation is the Interpellation. Intermediation is a concept based on intertextuality. Intermediation means that a text is quoted, reconstructed and added to another text, mainly by imitating the formal features of the original work (Ljungberg, 2010). The Candle in the Tomb mimics the original's artistic form and narrative structure to the greatest extent possible, drawing on and exploiting the large fan base that had already been acquired prior to the film adaptation through emotional empathy (Xiao, 2021). This kind of transformation from the original work, with love or even fascination for the original work, forms a complex participatory culture and a more independent circle of fans of the medium around the original work, here called fans of the original.

Secondly, Candle in the Tomb, one of the films in the series, has, since its release, shaped a fantasy view independent of the natural world through how the various branches have remained consistent in title, theme and style. Regarding serialisation, Carolyn Jess-Cooke argues that film sequels prompt audiences to read across texts self-reflexively and that sequels are responses to earlier works that also evoke audiences to reread or reread or reread or reread or reread rewrite their memories of previous texts (Jess-Cooke, 2009). In the simultaneous engagement with past and present texts, the viewer notices the dialogue between the sequel and its predecessor and constructs mutual meaning (reenactment). This interconnectedness is unique to Candle in the Tomb fans in that each work has a unique symbolic meaning, and it is impossible to ignore the critical role of the previous texts in
influencing the production of the later ones. The *Candle in the Tomb* franchise locks in or limits audiences, often preventing potential audiences from joining in unless they are willing to start with the narrative (Beaty, 2016). Those who follow the movie and become fascinated by its narrative are called roadies fans.

Regardless of the type of fan, the Tomb series, as a subculture, has limited space to survive in China. As fans of Tomb content find it difficult to gain respect and satisfaction in real life, the Tomb film series provides an exclusive arena for them to aggregate individuals. According to Bourdieu's field theory, society is a large field, the workplace is a subfield, and the fan community is a new subfield; Individuals change roles in these fields according to their capital (Bourdieu, 1998). When the capital they have in one field is not sufficient for their identity, they switch roles to gain capital in another field to obtain their identity.

With the support of the mobile internet, the Tomb series has opened up a space of discourse that belongs to Tomb fans. Take *Baidu Tieba*, one of China's community platforms, for example, where the 'Candle in the Tomb bar' was first posted in 2006 and has gathered over 623,000 users and nearly 3.86 million posts to date (9 May 2022). The bar owner (screen name "I love Candle in the Tomb") categorises the community's content into videos, bar owners' recommendations, original novels, film and television, and gossip stories for fans to choose from. Fans can use their initiative in the fan community to gain capital and control more resources and initiatives. When a poster named "Tianxia Changba" (the novel's author is named Tianxia Bachang) shared his understanding of the novel in the bar, fans in the community responded with "yes", "It is good," and "top it up" were the positive responses from the community. Individuals gain a sense of belonging by participating in the fan community and achieving self-identity and satisfaction. Through community integration and individual participation, to some extent, the Tomb series of films aggregates audiences from different media fields and establishes a successful contact (Li, 2020).

**Analysis of fan behaviours in the Tomb movies**

From Michel de Certeau to Henry Jenkins, the dynamic power of the viewer/consumer/reader/fan is well recognised, but the overemphasis on the fan's identity as the producer has also led to the neglect of the fan consumer. John Fiske suggests that the appropriation of texts by fans is an act of final consumption but never a clean separation of the two (Jenkins, 2012). In a transmedia system characterised by an IP-centric fan economy, fans are consumers and producers (Gong & Huang, 2017). These remind us that fan groups need to see fans as both consumers and producers, and thus the fan groups of the Tomb films will be studied through a dichotomous approach in this paper.

**(1) Fan base as a consumer**

Fans have different text consumption habits from the general public, and they are keen on peripheral product purchases. The term peripheral is used in the Japanese ACG industry for derivative products and is a more popular term among the fan community (Chu & Wang, 2017). Licensing peripheral products as merchandise is one of the most basic and vital ways to develop and realise consumer IP products (Zhang, 2021). Firstly, as an independent IP film brand, *Candle in the Tomb* has an emotional value to fans that other products do not. As IP derivatives echo the film's content, fans' purchase of preferred IP consumer derivatives is not a simple commercial purchase but rather another form of emotional expression and life-affirming implantation of their favourite IP (Zhang, 2021). It is a form of curatorial
consumption, i.e. the purchase and collection of all objects related to the objects they love. It changes the transient nature of culture and makes it a lasting and fulfilling cultural practice (Jenkins, 2012).

Secondly, when fans as individuals choose the text of the Tomb, they become part of the social space of the fan community. Social space can be seen as a symbolic space - a space constituted by social groups with different social forms, where the habits and tastes of the actors become a sign of class distinction (Bourdieu, 1998). For the sub-culture of Tomb fans, spatial compartmentalisation can create a sense of isolation within them, and Tomb's IP products provide a link to their identity. In the *Baidu Tieba* community, Tomb fans often post about their recent purchases, and fans within the community tend to be more enthusiastic about replying to posts that are iconic than the average post.

In addition to this, the consumption of Tomb IP peripherals can reinforce its fan identity. In contemporary capitalist societies, there is necessarily an ordered relationship between a set of consumer goods, in which the fundamental dominant factor is the symbolic value (style, prestige and position of power) created by the symbolic discourse suggestively (Baudrillard, 2016). Familiarity with works and possession of peripheral products are expressions of fan cultural capital, such as clothing, artefacts, dolls and accessories bearing the characters and logos of Tomb characters are symbols of fan identity. These symbols representing the group make members feel connected to the collective, while those filled with a sense of collective solidarity respect the symbols extraordinarily (Collins, 2012).

**(2) Fan base as a producer**

Tomb film fans are already more than simply consumers of media texts; they are a group of people brought together by an emotional connection to the same object, connected by a common love. Fans are a creatively productive group. Because of their over-interpretation and emotional investment in popular culture, fans voluntarily add their own emotions and will to the original text, actively producing and creating text from it, i.e. fans are textually productive (Fiske, 2010). Fans of Tomb films obtain the original text, process it and produce products with a specific cultural meaning, using their technical approach and means of thinking. For example, there are various other products, such as spin-offs of the IP series, fan-drawn comics and derivative products. (Figure 1) Fans analyse the original text to form a knowledge community and make bold predictions and speculations about the film based on their basic knowledge. For example, a fan named 'rednosegod' in *Baidu Tieba* analysed the future of the film and what the protagonist might face in the future by depicting the cave space himself (Figure 2).
Fans of the Tomb series are adept at sharing and creating their own emotions within the group. Ling Yang describes it as a kind of fan economy, where fans uniquely present their love for their idols or media texts and participate in fan group practices such as fan fiction, fan-made videos, and classical fan analysis. Fans spend time and effort creating their works and selflessly share and disseminate them as gifts to the group's fans, building their own identity and gaining recognition from the group members in their way, while fans can also enjoy the excellent texts created by other members of the group, further extending and deepening their emotional connection with their idols or media texts (Yang, 2015). The highly prolific video creator bilibili.com is home to many fans of Tomb content production. (Figure 3) These fans can be broadly divided into two categories, those who narrate the film's story characters and those who narrate the original story. Of these, the original story narrations make up the majority. They refer to the content of the film to introduce the original story. There are also many fans of the character "Pangzi" in Baidu Tieba who are loyal viewers of the main series and have produced several high-performance compilations of the character and a series of popularisations of other characters. (Figure 4) The secondary creation of the tomb film distinguishes film fans as producers from the general audience, and Jenkins argues that while this is a form of cultural poaching, the participatory reading of fans embodies interconnected processes of discussion that extend the textual experience and go beyond initial consumption (Jenkins, 2012). Excellent texts created by fans can also be commercially exploited if businesses see them, thus converting them into tangible economic capital. This in-group sharing and social media operation also contribute to the widespread promotion of IP films, achieving a win-win situation for both parties (Wang & Yang, 2020).
The battle for sovereignty over the text of the film by fans of the original

In his study of fan culture, Jenkins introduced the concept of "participatory culture", which refers to a fan culture in which fans are connected in a free, equal and openly shared way (Jenkins, 2012). This theoretical connotation coincides with the spirit of the Internet, and it is on the Internet that participatory fan culture is developed. By actively creating media texts and disseminating media content on the Internet, Tomb IP fans strengthen the interactivity between online interactions, and this strengthened interaction feeds Tomb IP fan culture to produce meaning more actively and efficiently. However, there are also complex interactions between fans that are both unified and conflicting, leading to the shifting of boundaries between different fan groups and the changing and reconfiguring of the identities of multiple fan communities (Phillips, 2011). Original fans have a contentious relationship with the author of the film over ownership of the text and interpretation of meaning. Usually, the reader (the original fan) is always in a passive defensive position, accepting the meanings prescribed by the authority (the producer), and any deviation from the meanings prescribed and limited by the producer is negatively evaluated (Guo, 2017). However, in the state of IP franchising, the status of the fan as a producer should be repositioned (Bowrey, 2011).

The above section divides the production of fans of the Tomb films into original fans and passerby fans, who have higher emotional loyalty and textual expectations of the film texts than passerby fans (Benyon, 2020). Fans of the original are inevitably drawn to the adaptation because they were the first to encounter the original plot. Because of their emotional value, fans of the original (including the original author) want to see the specific plot as accurate to the original author as possible when they encounter the adaptation to meet their inner expectations. Therefore, the author of an IP film needs to make it part of the film's operation to accommodate the expectations of the original fans and legitimise the film's interpretation (Guo, 2017). The core competency of Tomb IP films is content. When the fans of the original are not satisfied (usually when the adaptation is far from the original content), they will rebel.
out of their desire to preserve the original image in their minds, and this emotion will be expressed through externalisation (Gong & Huang, 2017).

A significant part of the fan base of IP movies adapted from online novels is influenced by opinion leaders originating from the fan base, namely the authors themselves (Wang & Yang, 2020). Thus, for a tomb film series adapted from an online IP, it faces a complex relationship between the creator of the film, the fans of the original and the author, who plays with the space of the work (text). The tomb series of films creates a space for fans of the original to have an equal dialogue. Jenkins' theory of 'poaching' pushes the reader and the author into an unprecedented tension. Here, there is a constant struggle for ownership and control of the meaning of the text. Any text is waiting for the reader to give it meaning, and any reader, through his or her own discursive and aesthetic experience, will establish a framework before reading it and match and screen it in the process (Jenkins, 2012). Both fans of the original and the author of the film (one of the original fans) are seen here as poaching. In essence, they are on the same equal footing, but the equality between fans is broken when this poaching is re-sold as a product to the original fans through cultural processing by the author of the film. The power imbalance has led to resistance from fans of the original Tomb film and a struggle over the text, which has been discussed on the Chinese social media platforms Baidu, Douban and Zhihu. Fans of the Tomb IP movies have used the status label "having read the original" to denounce the authors of the movies, creating a strategic atmosphere of "respect for the original".

Michel de Certeau suggests that strategies are characterised by a unified subject of power, an exclusive site that can be defined and thus clearly distinguished from the 'other', the 'outside', by establishing what he calls 'enemy-versus-us relations' (Certeau, 2009). Here, fans of the original Tomb series do not embody traditional readers' nomadic, tactical identity but rather drive out the poachers by forming a solid territory with the original authors as the core of their combined efforts. Their relationship with the original authors is not one of textual poaching or strategic resistance but rather self-empowerment in a cross-media migration. Fans of the original (self-perceived) share the identity resources of the original and thus have a certain sense of authority or even the power to question the adapted text in place of the author of the original. For fans of the original Tomb IP series, their self-perceived status has been transformed across media platforms, hence the competition for the film's text. In many tomb movies, the writers always use "we have restored the original" as a selling point, after which a "high degree of restoration" is highlighted as the core point of publicity. In this ritual of empowerment, fans, as a highly engaged audience, have begun to consciously rebel against the centralised media system, advocating "decentralisation", dismantling and reshaping the official discourse, and finding a breakthrough for their consumer behaviour. As fans of the originals contend with the authors of the films, fans are aware of their growing position as subjects of power. They are increasingly eager to form checks and balances in their communication with the creative company and to escape from the central discourse of the higher communication subjects.

The phenomenon of textual battles for fans of the original also occurs in the struggle with other films, such as The Lost Tomb, a series of IP adaptations similar to the Candle in the Tomb. Due to the similarity of their subject matter, they are often the focus of fan arguments. Fans of Candle in the Tomb's original film argue that the character "Pangzi" in The Lost Tomb's film is not found in the original and that it copied Candle in the Tomb's text for the sake of narrative richness. On the public social media platform Weibo, fans of Candle in the Tomb have responded strongly to fans of The Lost Tomb, citing various evidence and even...
some crude language. Fans of the original *Candle in the Tomb* share a joint psychological base - an identity. The 'resistant identity', which constructs the subjectivity of the self/group by confronting the other, has the powerful function of drawing boundaries, and the 'distinction' can often lead directly to the formation of a community (Castells, 2011). The Tomb IP fan community has consolidated its status as a fan construct and identity while being united. In the context of the Internet-based culture of fan participation, fans of the original have re-established their position of power in their interaction with society through commentary, questioning and opinion-led participation.

The values and impact of the film

(1) Export of Chinese culture

As an IP film, The Tomb is one of the products of China's strategic layout of production upgrading in the Internet+ era in recent years (Li, 2020). Chinese IP films are becoming a powerful tool for building cultural identity internally and enhancing cultural communication externally as a film genre with a large fan base. Although the "Tomb" genre is characterised by fantasy, thriller and spooky aesthetics, it is rooted in the ancient mysterious cultural system of the Eastern peoples. In Candle in the Tomb, the author of the novel, Tianxia BaChang, has created a world of tomb raiding represented by the four schools of tomb raiders, namely *Mojin*, *Xieling*, *Faqiu* and *Banshan*, and a discourse system and *Jianghu* full of mystery, which provides a unique Chinese culture and Chinese spirit, and is expressed in a unique form of Chinese cinematic aesthetics (Zhang, 2019). It is expressed in an aesthetic form of Chinese cinema. Tomb IP fans who identify with the film's content will, over time, subconsciously identify with the culture. At the same time, the widespread of fans on the Internet creates a solid promotional environment for the Tomb IP. With a solid fan base and high-frequency IP, the IP film's fame and impact will grow quickly, creating the groundwork for the promotional brand and culture's success. Chinese IP films draw creative inspiration from traditional culture and real life to achieve value in farming and cultural confidence (Li, 2018). In a way, Tomb movies strengthen the confidence of Chinese fans in their own culture and the spread of Chinese culture.

(2) Entertainment-heavy consumer environment

The Internet is anonymous. With the anonymity of the Internet, the public can become less self-aware and not want to be held accountable for their actions (Christopherson, 2007). In being channelled, the Tomb fans are constantly enjoying the little things that turn the court of public opinion into an irrational crusade in the wave of entertainment revelry. In the constructed fan communities, some netizens follow the trend of cathartic expression of personal emotions without question of right or wrong. Their limited attention is attracted by the generalised information, blurring the boundaries between primary and secondary, public and private, light and heavy, and leaving their minds numb and incapable of thinking. The development of the Tomb IP movie stems from the love of online fans, which may lead some of them to overindulge in the virtual online community, and the entertaining online space then becomes an environment for them to grow, vent their emotions and find faith.

At the same time, Xinyun Jiang and other scholars have analysed that IP positively impacts consumers' utilitarian and hedonistic values in their articles (Jiang, 2022). IP films, as fan films, are a symbolic cultural consumption product that uses film as a vehicle to cater to and satisfy fans’ excessive consumption of their idols by using the gimmick of entertainment
icons crossing over to be the creators of films. Due to the frenzied consumption of fans, an IP industry chain is being constructed based on the co-development and integration of multiple domains of the Internet and mobile networks (Yan & Lee, 2021). Tomb fans may buy Tomb IP-related products in large quantities out of a need for identity and emotional projection. In consumption, the fan community and IP derivatives become their spiritual anchor. The industrial operation of the Tomb IP and the consumption habits of fans to satisfy their identity cooperate, to some extent causing damage to the psychology and economy of fans, and even other irrational consumption behaviours such as some fans not eating to save money to raise funds to vote in the charts.

Conclusion

*Candle in the Tomb* has become one of the popular texts in China as a result of its unique model of creating separate worlds through IP adaptations. Through an analysis of the value orientation of the behaviour of Tomb IP fans, this paper argues that the Internet has provided a vast space for IP fans to participate, resulting in the formation of diverse fan communities. Tomb fans analyse and exchange their reading experiences in the online community and spread the word about the products they generate. Tomb fans gradually develop a strong sense of belonging and identity in their time with the fan community, becoming a powerful group. No matter how much emphasis is placed on the productive nature of fans as transitory consumers in popular culture studies, fan identity is always tied to consumption, and fans' textual consumption and textual production together constitute their fan identity. The act of purchasing gives the fan consumer a sense of satisfaction on a psychological level while strengthening the connection between the individual fan and the community. This sense of belonging to an organisation can, to some extent, create an emotional resonance with the fan base and deepen the bond between fans and the original work. As a series of films adapted from the original, the behaviour displayed by Tomb fans is inevitably linked to the author of the original. A text that is not linked to the original cannot be circulated and accepted by the fan community, leading to a series of rebellions from fans. Under the egalitarian conditions of the Internet, Tomb fans have actively participated in building a community forming a unique aesthetic and have a strong desire for expression and practice, and are working to create an equal relationship of power with the film's author. The Tomb as a film adaptation connotes a distinctive Chinese culture, which is widely spread in the production and consumption of fans, deepening Chinese fans' identification with their own culture and cultural confidence. The economised properties of IP adaptations bring excessive commercialisation to Tomb fans. The cult of entertainment on the Internet has become a meaningful way to express their feelings and meanings, conveying false values in the constant construction of individual identities. At the same time, the above summary in this paper is articulated around a sample of fans on public Internet platforms and does not give a good overview of fan communities on some private social software, so it is difficult to have a comprehensive analysis of the behaviour of ancient tomb fans. Overall, IP adaptations cannot be made without the support of fans. The analysis of *Candle in the Tomb* fans' behaviour provides a preliminary basis for further exploring the development of IP adaptations and how to maintain the relationship between fans properly.
Bibliography


Ambivalent Perceptions of Beauty and Fashion: A Qualitative Study of Chinese Female Students Studying in British Universities

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Abstract
The research explored the experiences of Chinese female students studying in the UK concerning fashion and beauty by investigating the students' definitions of beauty and exploring how social media exposure in different countries and living in a new country affect their perceptions of beauty. This research answered this question through qualitative methods, recruited participants by purposive sampling, collected data through semi-structured interviews, and drawn conclusions by thematic analysis. Chinese female international students' definitions of "beauty" are diverse, and they try to achieve their ideal beauty through fitness and exercise. Chinese social media platforms affect students' beauty perception more than foreign media platforms, and these influences are negative. In addition, conservativeness and close kinship in the Chinese social and cultural background are the factors limiting the perception and expression of "beauty" by Chinese female international students. However, their beauty perception changed when they moved from the Chinese social culture to the UK, so social and cultural backgrounds may influence their beauty perception more than social media in a cross-cultural context. Because the cross-cultural and social media environments are complex and dynamic, the efforts of female international students to find appropriate methods for beauty perception and identity construction in the process of cross-cultural adaptation are far more complicated than we imagine.

Keywords: Cross-Culture, Social-Culture, Female, International Students, Media, Beauty
I. Introduction

1.1 Justification

In recent years, "white, youthful, and skinny" has been the prevailing aesthetic style in Chinese society. Thin, pale, and youthful women are welcomed, encouraged, and followed on social media platforms and in real life. The concept that "thin is beautiful" continues to rise; many young women try to attain this goal through risky methods such as dieting and the misuse of weight-loss medicines. This unhealthy and even distorted look has garnered controversy and criticism. With Gu Ailing's victory at the 2022 Beijing Winter Olympics, an increasing number of Chinese women noticed her healthy figure and optimistic perspective. In an interview, Gu Ailing also asserted that "white and slim is not beauty; health is beauty", which sparked a lively debate on social media. On Xiaohongshu\(^1\) and other social media platforms, Chinese women have begun to critically analyze the idea of female beauty. For instance, a blogger who explored the new definition of beauty on her site stated that "beauty is a highly subjective adjective that should not have strict criteria".

The series of discussions brought by Gu Ailing have profound cultural connotations. Gu Ailing was born in the United States in September 2003, Chinese-American. In June 2019, she announced through social media that she officially became a Chinese citizen and began to represent China in the World Series. At the 2022 Beijing Winter Olympics, she won the gold medal at the age of 18, becoming the youngest Olympic champion in freestyle skiing. Gu Ailing's growth was completed in a Western context, which made more people attribute her "differences" to the fact that she was influenced by a different culture from Chinese women: Gu Ailing's advocacy of health aesthetics was influenced by Western culture; Influence, and Chinese women's pursuit of "white, youthful, thin" beauty is influenced by the Chinese cultural background.

Social-cultural differences impact how individuals perceive their bodies (Wardle et al., 2006). Similar to Gu Ailing, there is another group of Chinese female university students in the United Kingdom who may similarly be impacted by two distinct social cultures. While studying in the United Kingdom, they may be influenced by the interplay of two distinct cultures, both online and in person, from their home country and the location of study. They may be in the vanguard of cultural fusion, confrontation, and conflict and possess the most intuitive grasp of how this cultural conflict affects them. According to Higher Education Student Statistics UK\(^2\), 49% of full-time postgraduate students in the UK come from non-EU countries. China sends more students to the United Kingdom than any other nation in the world. In the academic year 2020/21, 32% of non-EU students came from China. In addition, 57% of all college students enrolling in the 2020/21 academic year were female. This group of Chinese female students enrolled in British universities is therefore of tremendous research importance. This study intends to analyze the ambivalent conceptions of beauty and fashion among Chinese female university students in the United Kingdom, and to consider what roles social culture and social media play in their beauty perceptions formation. This article will investigate the following issues: 1) How does this group view "beauty"?; 2) How do social media and cross-cultural environments affect their perceptions of "beauty"?

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\(^1\) The Xiaohongshu is a platform for social media and e-commerce. The Chinese equivalent to Instagram. It has around 300 million registered users and over 85 million monthly active users as of 2019. 70% of its users were born after 1990, and approximately 90% of them are women, according to reports. The app allows users and influencers to post, discover, and share beauty and health-related product reviews.

1.2 Beauty Regimes

1.2.1 The Role of Social and Cultural Factors

People's perception of beauty can be shaped by many factors. Social and cultural influences play the largest effect on body size perception of oneself and others (Furnham & Alibhai, 1983), and different regional cultures may influence people's attitudes regarding body image, weight, and beauty (Kowner, 2002; Wardle et al., 2006; Jung & Lee, 2006). Evidence indicates that this trend is particularly robust in Asia (Madan et al., 2018). Notable among these is a quantitative study of body image and weight control among college students in 22 countries. The results indicated that both male and female college students in Asian nations lost more weight across all weight categories. Perceptions of being overweight and trying to lose weight are strongest in Asian countries, where obesity rates are generally low (Wardle et al., 2006). In addition, it is worth mentioning that in a survey of Chinese and Croatian women's dissatisfaction and perception of female body image, it was found that thin internalisation can predict the dissatisfaction with women's body image in both countries, and Chinese women's dissatisfaction with their body image is scored higher (Stojicic et al., 2020). Compared to Croatian women, Chinese women experience greater pressure from family, friends, and the media to adhere to standard aesthetic norms, and consequently have more negative opinions of their actual body shape (Stojicic et al., 2020).

1.2.2 The Role of Social Media Platforms

Research shows that more time spent on Facebook and/or Myspace are associated with body dissatisfaction, weight loss, internalization of thin ideal, body monitoring, self-objectification and increased dieting level. This result is found among preadolescent girls (Tiggemann & Slater, 2014), female high school students (Tiggemann & Slater, 2013; Vandenbosch & Eggermont, 2012) and female undergraduates (Cohen & Blaszczynski, 2015; Fardouly et al., 2015; Fardouly & Vartanian, 2015). Moreover, certain types of activity on social media in particular are likely to make the phenomenon worse (Meier & Gray, 2014). For instance, according to Meier and Gray (2014), higher exposure on Facebook (such as posting, viewing, and commenting on images) is associated with greater dissatisfaction with weight, thin internalization and self-objectification of slim ideals among female high school students; Online social grooming behaviors (e.g., browsing and commenting on peers' Facebook profiles) are significantly associated with female college students' desire for thinness (Kim & Chock, 2015). In addition, the importance of Facebook for one's social life is associated with objectified body consciousness (i.e., appearance self-worth and body surveillance) and body shame among male and female undergraduate students (Manago, 2015).

The large number of photos posted on social media platforms provide users with the opportunity to make regular social comparisons related to their appearance. Research by Myers and Crowther (2009) shows that constantly comparing one's physical appearance to others (especially those who are more attractive than oneself) can lead to negative body image. In addition, studies on female undergraduate students have found that a tendency to compare one's appearance to others (particularly to one's peers) mediated the relationship between Facebook usage and body image concerns (Fardouly & Vartanian, 2015). Similarly, among female college students, physical appearance tends to mediate between Facebook social grooming behavior and thinness drive (Kim & Chock, 2015). Therefore, appearance comparison plays an important role in the relationship between social media use and body image concern.
1.2.3 The Role of Cross-cultural Context

Cross-cultural adaptation occurs at the stage when all cross-cultural travelers start life in a new country (Kim, 2017). The process of adapting to an unfamiliar culture unfolds through the stress-adaptation-growth dynamic. Over time, through continuous activities of new cultural learning, most people are able to attain increasing levels of functional and psychological efficacy vis-a-vis the host environment (Kim, 2017). Kim thinks that, underpinning the cross-cultural adaptation process are the two interrelated experiences of deculturation of some of the original cultural habits, on the one hand, and acculturation of new ones, on the other. Campbell and Rew (1999) proceeded from an anthropological framework, using the term "identity" to piece together personal desires and experiences, local ways of being, politics and culture, belonging to national "tribes", and global meanings and discourses into one complex structure that constitutes subjectivity. All of these are aspects of "stitching" complex subjectivity that international students have (re)constructed. Some would argue that all cultures are mixed cultures, all subjectivities are mixed, accepting/rejecting the cultural values and influences of various cultural discourses (Koehne, N., 2005). For example, Bhabha (2012) argues that all forms of culture are continuously in a process of mixing...(creating) "third spaces" that allow other locations to emerge. However, when people move into another culture (He, 2002) and speak another language for as long as international students do, the creation of third spaces and the construction of mixed subjectivity tend to materialize. As Hall (2015) himself experienced, when you live in mixed cultures, you "learn to inhabit two identities, speak two cultural languages, and translate and negotiate between them". Constantly going in and out of the way the language and culture exist is something that international students experience and talk about as part of being an international student. In this period, their beauty perceptions may change.

1.3 The Present Study (Research Gap)

Thus, there is indeed literature on the following aspects: Sociocultural factors play a dominant role in the perception of beauty in oneself and others. In addition, people's use of social media also affects their perceptions of beauty and fashion, with social media providing an opportunity to compare physical appearance and, as a mediator, also affect people's perceptions of beauty and fashion. Intercultural adaptation occurs in intercultural travelers, including international students, who are influenced by many sociocultural factors. However, the current research focus of the relevant literature is still on the comparison of groups in different regions and countries, and there is still a research gap in the comparative study of the changes in the identity construction of the same group under different cultural backgrounds. This research aims to explore how exposure from different countries' social media platforms and living in a new country affects the fashion choices and beauty regimes of Chinese female international students, thus contributing to the existing body of knowledge on cross-cultural identity reconstruction.

II. Method

2.1 Participants

The participants are 10 female students from China who are currently studying undergraduate and postgraduate studies at universities in the UK. I made a clear attempt to recruit eligible females of all ages from different social media platforms, including WeChat and Xiaohongshu. I did not match them on other factors. Among them, 1 person is from first-tier
cities, 5 people are from new first-tier cities, 2 people are from second-tier cities, and 1
people is from Taiwan. Table 1 lists other demographic information (Age, Relationship
status, Children, Education level, Employment status).

<table>
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<tr>
<th>Participant Pseudonyms</th>
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<th>Education level</th>
<th>Having work experience</th>
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Table 1: Demographic information per participant

2.2 Procedure

As this study has a fairly clear focus, I chose the form of semi-structured interviewing for
data collection. In addition, I chose the form of virtual video interviews. The online interview
format has the advantage of greater flexibility, which is expected to allow participants to
provide more in-depth answers through longer, uninterrupted interviews to provide richer
data. Before data collection began, I first applied for ethical review and received ethical
approval from the Glasgow Ethics Committee. I designed an interview schedule with a series
of questions (for specific interview questions, please refer to the 6.1 Interview Schedule in
the appendix). Before the start of each interview, I sent the participants a Consent Form, a
Participant Information Sheet and a Privacy Notice. Interviews only began after I obtained
their consent and received the consent forms they signed. Questions in the interview schedule
were not asked exactly as listed, but in general, all the questions were asked and a similar
wording were used from interviewee to interviewee (Bryman, 2016). Questions were
developed based on the literature, but an inductive approach were utilized which allowed for
participants' responses to guide discussion, as is recommended in the literature (Wilkinson,
1998).

2.3 Data Analysis Method

I established an audit trail, including an ongoing record of all activities, discussions and
decisions, to provide logical clues and enable other researchers to judge the credibility of
findings and interpretations (Creswell & Miller, 2000). The entire interview was recorded and
saved. It was transcribed into a written version. Word-order pauses and body movements
were also transcribed and annotated, allowing me to examine what participants are saying
more thoroughly.

Thematic analysis is used to identify and analyze the data. I used the thematic analysis guide
proposed by Braun and Clarke for thematic analysis. This approach is chosen because it is not
bound to a pre-existing theoretical orientation, nor is its goal necessarily to generate new
theories (Braun & Clarke, 2006). The 'keyness' of a theme is not necessarily dependent on
quantifiable measures but rather on whether it captures something important in relation to the
overall research question (Braun & Clarke, 2006). Reflexive thematic analysis (Braun &
Clarke, 2019), with an inductive approach (i.e., having data as the ground of analysis), was
used to generate themes among women’s responses to the interview questions. In the study, I
first read the transcripts to familiarize with the data and to write notes concerning interesting
features from the data. Next, I re-read the entire dataset multiple times, simultaneously
generating initial themes and subthemes through coding. Last, I revised the themes and
subthemes, going back to the dataset where necessary.

III. Results (Data Analysis)

In this part, I generated two major themes: 1) participants' perceptions of beauty; 2) factors
that affect participants' perceptions of "beauty". In the first part, I mainly explored the
participants' definition of "beauty" and their efforts to achieve the ideal "beauty". In the
second part, I explored the changes in the process of cross-cultural beauty perception of
female international students, as well as the opportunities and challenges they encounter in
this period.

3.1 Beauty

3.1.1 The Definition of Beauty

In this part, I mainly present what female international students think of "beauty". Besides, I
also present the "ideal beauty" they present in social media, and discuss the differences and
connections between them. I mainly summarize the "beauty" in their perception by asking:
"What do you think is true beauty?", and generalize the aspects that involve the definition of
"beauty" beyond this question. In addition, I comprehended their "ideal beauty" on social
media platforms by asking them about their social media activities, including photo postings.

When discussing the definition of "beauty", some participants gave specific descriptions,
including "slim", "healthy" and "strong". For example, participant Yu identified "slim" as a
criteria of beauty. She believes: "If a person is thinner, I think she/he will look better in
clothes and look more refined." Mian and other five participants listed "healthy" as one of the
definitions of "beauty", and emphasized the importance of "healthy": "I think the pursuit of
any kind of beauty must be based on health." Further, another participant Ding, a former
professional track and field athlete, took "strong muscles" as her definition of beauty. She
mentioned: "I think Miss Bikini is beautiful. It's really difficult for a woman to get a strong
muscle, but I've been working hard in that direction."

However, some participants gave less specific descriptions, such as "confident" and "unique"
temperament. Jenny, Zoey, Yi and Mao explicitly use "confident" as one of the definitions of
beauty. Jenny and Mao emphasized: "I think self-confidence is a very important thing." "If a
woman can show a confident temperament, then I think she is beautiful." Participant Yi
described "confident" in a more detailed way: "If I see a person on the street with a raised
head, a natural demeanor and good manners, I will be attracted. So I think if you are

3 The four main divisions in most natural bodybuilding shows right now (2016) are bikini, figure, female
physique, and female bodybuilding. In the most basic, a bikini is a sleek, smooth feminine look that most people
consider a "fitness model." The word used for bikini athletes is "tight and shapely".
confident, you will have a unique temperament that can attract others." On the other hand, participants Yi and Jenny also raised the importance of "finding a style that suits you". Participant Yi explained: "I don't think people should always copy other peoples' styles because it's very likely that those trends don't suit them at all. I think everyone has their unique style, so people need to find the one that suits them to express their real beauty."

Therefore, I found that these ten female international students have their own considerations for the definition of "beauty" and there are big differences between them. This finding corresponded the notion of "diversity" that the six participants made clear in the conversation. As participants Mian and Rachel reflected: "I think it's okay for everyone to think differently about beauty." "I think my beauty definition for women is very broad, and I can appreciate all kinds of females' beauty." When asked about her opinion on the phrase "white and slim are not beauty, health is beauty", participant Luo also said: "I think what we should really advocate is beauty's diversity. I mean, you have the right to pursue a slim body, and you also have the right to pursue other types of beauty. As long as the process of pursuing beauty is healthy and happy, I think it is enough, and the rest has nothing to do with me." It can be seen that participants pay great attention to the diversity of beauty.

In conclusion, the ten female international students have different definitions of beauty. Notably, this finding runs counter to what I assumed before the study began that more women might use "slim" as a criteria of beauty: only one participant explicitly listed "slim" as one of the criteria, and more women focused on the development of personal health and personal temperament.

3.1.2 How to Achieve Their Beauty Goals?

First of all, in order to achieve the goal of "healthy" beauty, Ding and other four participants chose to exercise in the gym. Ding reflected: "I go to the gym almost three or four times a week, which has become a habit of mine." In addition, participants Rachel and Zoey also have the habit of dancing, and they regularly participate in dance classes in the fitness center. Rachel participates in dance classes twice a week, and Zoey also actively take part in the experience classes offered by the dance studio, including ballet, hip-pop, etc. It can be seen that these women are working hard to achieve their ideal beauty.

3.2 Factors That Affect Perception of Beauty

In this part, I will focus on two factors that affect Chinese female international students' perception of beauty: 1) social media exposure; 2) different social and cultural backgrounds.
3.2.1 Social Media Exposure

Table 2: Social media platform usage

<table>
<thead>
<tr>
<th>Participants</th>
<th>Social media platforms used (in descending order of duration)</th>
<th>Posting personal photos on</th>
<th>Total usage time (Hours/ day)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rachel</td>
<td>Xiaohongshu, Wechat, Douyin, Instagram</td>
<td>Wechat Moment, Xiaohongshu,</td>
<td>7-8</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Instagram</td>
<td></td>
</tr>
<tr>
<td>Mian</td>
<td>Wechat, Douban, Weibo, Instagram</td>
<td>Wechat Moment, Instagram</td>
<td>5-6</td>
</tr>
<tr>
<td>Xian</td>
<td>Xiaohongshu, Wechat, Instagram</td>
<td>Wechat Moment, Instagram</td>
<td>4-5</td>
</tr>
<tr>
<td>Yi</td>
<td>Wechat, Xiaohongshu, Instagram, Weibo</td>
<td>Wechat Moment</td>
<td>7-8</td>
</tr>
<tr>
<td>Ding</td>
<td>Xiaohongshu, Wechat, Facebook, Weibo</td>
<td>Wechat Moment</td>
<td>7-8</td>
</tr>
<tr>
<td>Xian</td>
<td>Wechat, Xiaohongshu, Weibo, Instagram</td>
<td>Wechat Moment, Instagram</td>
<td>6-7</td>
</tr>
<tr>
<td>Mao</td>
<td>Wechat, Xiaohongshu, Weibo, Instagram</td>
<td>Wechat Moment</td>
<td>2-3</td>
</tr>
<tr>
<td>Jenny</td>
<td>Wechat, Xiaohongshu, Douyin, Instagram, whatsapp, Weibo</td>
<td>Wechat Moment, Instagram</td>
<td>3-4</td>
</tr>
<tr>
<td>Yu</td>
<td>Wechat, Xiaohongshu, Weibo, Instagram</td>
<td>Wechat Moment</td>
<td>7-8</td>
</tr>
<tr>
<td>Zoey</td>
<td>Wechat, Xiaohongshu, Weibo, Instagram</td>
<td>Wechat Moment</td>
<td>6-7</td>
</tr>
</tbody>
</table>

As we can see, the use of social media has become an essential part of the life of these female international students - their average daily social media use reaches 5-6 hours. Another thing worth mentioning is that social media platforms they used did not change completely based on the country they live in: even if the country they live in changes from China to the UK, they are still more dependent on Chinese social media platforms. As Yi stated: "Although I followed some fashion bloggers on both Xiaohongshu and Instagram, I still think Xiaohongshu has more influence on what beauty is to me. The first reason is that I use Xiaohongshu more frequently than Instagram. The second reason is that I think I still prefer to read Chinese when I read relative information. Besides, I feel that the content of these Chinese outfit bloggers is more practical for me." Thus, in cross-cultural settings, Chinese social media platforms may still have a mainly impact on their identity construction than Western social media platforms.

Rachel talked about her feelings about using Chinese social media: "I think the fashion and beauty bloggers on Chinese social media platforms are all very white and very thin, making people feel that only thin people look good. Besides, anyone can post comments on social media platforms, whether the comments are good or bad. If there is a fat girl or a girl who is not very good-looking posted some photos, someone will directly say 'you are so fat/ugly' in the comments section below. I think it will deeply hurt the girls who post the photos. It make me feel that girls will be more and more dissatisfied with themselves in this situation." Mao also stated her feeling: "Sometimes when I don't look at the information on social media, I feel that I am in good shape and not too fat, but when I see those pictures that are promoted on social media, I get very anxious and think if I am trying to lose weight. And when I buy clothes on the website, I will see that the models are very thin, making me feel that only thin is beautiful."
3.2.2 China's sociocultural context

When discussing how China's sociocultural context affects these participants' perceptions of "beauty", I would like to use the "fashion shame" proposed by participant Mian during the interview to summarize the overall context. The term "fashion shame" means: a feeling of inferiority and shame when wearing "fashionable" clothes in some environments where they think their attire is not appropriate with. Mian, the participant who coined the term, did not define exactly what "fashionable" clothes meant, but described a phenomenon: "When I was young, my parents told me that children should not dress colorfully when they go to school. I think every parent would tell their children like this. It led to a result that even though I have grown up and had my own dressing style, I would feel a sense of shame if I wore some colorful and exaggerated clothes. Besides, I'm afraid people will notice what I'm wearing, and I'm worried they will think what I'm wearing is inappropriate." This long-standing "fashion shame" led them to be afraid of wearing more variety and bolder clothes, because they are afraid that they will appear "strange" in the eyes of others.

I found that the reason for such "fashion shame" mainly comes from two aspects: First, the conservative social environment makes women have greater worries when choosing what to wear. Secondly, the social characteristics of strong social ties in Chinese society also make women have to consider the eyes of others when presenting their own "beauty".

First, participants mentioned the word "conservative" many times in the conversation to describe the social state of China. Mao said: "In the perception of some Chinese parents, wearing bright eyeshadow or bright lipstick is considered a kind of heavy makeup. For these Chinese parents, people who wear heavy makeup are very bad, because they think that only some prostitutes wear heavy makeup. This is one aspect that I think Chinese culture is somewhat conservative." It is not just among the older elders. Rachel mentioned other groups: "Actually, at my bachelor university, there are girls who dress boldly, like some girls would wear tight super mini skirts. But the comments from my peers around me are not friendly, and some of them may say dirty talk to those girls. So sometimes you have to choose more conservative clothes to avoid this situation." Jenny elaborated on the impact that a conservative environment may have on young women: "I feel that it may be because China’s parents and elders are more conservative, so they use repressive education methods. So I met a lot of young women who are very good, but at the same time they have low self-esteem and are not confident."

Second, when discussing what influenced their perception and presentation of beauty, participant Mian brought up a phenomenon that "in China, everyone may be more or less connected to each other, so everyone pays more attention to what are the people around them doing". In fact, she explicitly used the term "kinship" to describe Chinese society. Broadly speaking, kinship patterns can be thought of as encompassing people who are connected by ancestry—that is, social relationships in development—and by marriage. In some cultures, kinship may be considered to extend to those with whom an individual has economic or political ties, or other forms of social ties. Mian believes that compared to the UK, China's social network relies more on kinship for expression. This form of expression makes people in society more connected and more concerned about what those around them are doing, as well as being more concerned about what others think. Many participants expressed their discomfort with being overly focused. Mian mentioned: "Because I look white, I received a lot of strange looks from passers-by when I was young. Sometimes I felt like I was being molested by their eyes. I was even called to the office by my teacher when I was in..."
elementary school. My teacher asked me questions like 'you are too white, do you have any
disease?'. I am easily observed and commented on by others because of my appearance, and it
make me feel very uncomfortable."

In conclusion, female participants described China's sociocultural background as a more
conservative and closely related society, and felt that this social background made them more
restricted in expressing their "beauty".

3.2.3 British Social and Cultural Context

When discussing the socio-cultural background of the UK, the characteristics of
"inclusiveness" and "diversity" were mentioned by several participants in the conversation.
Such features were embodied in the participants' discussions on the theme of "freedom to
dress". Furthermore, from their descriptions of the environment of British freedom to dress, I
have tried to extract the British society's characteristics of "individualized".

Almost every participant mentioned the idea of "freedom to dress". Participant Mian
recounted: "In the UK, no matter how strange clothes you wear, or no matter what your body
shape is, you won't get some weird looks." Participant Ding also described: "I think the only
standard of British people choosing their clothes is that they think the clothes look good. I
feel like In the UK, nobody cares if you're too fat or what, or what clothes you wear. You can
wear anything without being judged. In this environment, I gradually don't worry much about
some kinds of the clothes will make me looks fat, and I buy clothes that I think is beautiful."
Freedom to dress is not only the freedom of men or women to wear their clothes, but also the
freedom of men to wear feminine clothes, as well as women's freedom to wear masculine
clothes. Today, women wearing masculine clothing is generally accepted or even a trend
(women wear overalls, etc.), but the acceptance of men wearing feminine clothing (skirts,
crop tops, etc.) still varies from region to region. Rachel used the word "shock" to express her
feelings when she first saw a man wearing feminine clothing after coming to the UK: "I
remember when I first came to the UK, I saw a man on the bus. He was dressed very
feminine, wearing a short top and a short skirt. I was shocked, but I found that people around
me didn't care at all, so no one looked at him or judged him." According to this, I
summarized the concept of freedom of dress mentioned by the participants, meaning: no
matter what kind of body image a person is, tall, short, fat or thin, she/he wears any clothes
without being judged by others. In this way, the whole society has reached a consensus that I
only care about myself.

This is very different from the social culture in China. As Rachel experienced, the Chinese
female student group will inevitably feel some differences in the process of cross-cultural
adaptation. Constantly going in and out of the way the language and culture exist is
something international students experience and talk about, and part of what they are as an
international student. I realized that Chinese female international students are constantly
affected by social-cultural context, and cultural context may influence their construction of
beauty perception more than social media. As Mao said, "I gradually realized that I shouldn't
be blinded by social media feeds. And when I came to the UK and saw so many confident
and bold girls, I started to care less about the deformed beauty standards that social media
espoused." Rachel also had a similar feeling: "After I live for some time in London, I realize
more clearly that when I think about whether I am beautiful today, I don't need to think about
what others think of me. I can be just like those British girls on the streets. Even if their
figure is not that good, they are very confident and think they are beautiful. Before I came to
the UK, although I always told myself not to care about other people's opinions, I still felt happy or sad when I heard good or bad comments from others. But now I really don't care what other people think. I think I'm beautiful, and I feel like my anxiety is about to go away."

However, are the effects of later cultures on the way beauty perception are (re)constructed permanent?

But, I'm going back to China. I think when I leave the free and open environment of the UK and go back to the environment in China, I may go back to the very uncomfortable state I used to be in. I don't think this change is permanent, it's only temporary.---Mao

Female international students may have realized this change. Cross-cultural and social media environments are complex and dynamic, so the efforts of female international students to find appropriate methods for beauty perception and identity construction in the process of cross-cultural adaptation are far more complicated than we imagine.

**IV. Conclusion and Discussion**

Chinese female international students' definitions of "beauty" are diverse, and they try to achieve their ideal beauty through fitness and exercise. Chinese social media platforms affect students' beauty perception more than foreign media platforms, and these influences are negative. In addition, conservativeness and close kinship in the Chinese social and cultural background are the factors limiting the perception and expression of "beauty" by Chinese female international students. However, their beauty perception changed when they moved from the Chinese social culture to the UK, so social and cultural backgrounds may influence their beauty perception more than social media in a cross-cultural context. Because the cross-cultural and social media environments are complex and dynamic, the efforts of female international students to find appropriate methods for beauty perception and identity construction in the process of cross-cultural adaptation are far more complicated than we imagine.
References


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Abstract
In contrast to the orthodox comprehensive planning approaches, several contemporary studies on public spaces have focused on the notion of how people utilize space and how they appropriate and inhabit the city. Since the 1960s, many theorists have embraced this idea and developed unconventional concepts such as spontaneous public spaces. Hence, this paper aims to investigate the forms of temporary appropriation to shed light on the role of spontaneity in Downtown Cairo passageways. While several researchers studied Downtown passageways in terms of physical aspects, there is a lack of literature that tackles the everyday spatial appropriation. Therefore, Al-Alfi and Al-Shereefen passageways were chosen for the investigation. Those passageways serve as a useful case study for examining the differences between the anticipated planned use of the space and the emergent practices that evoke spatial and socioeconomic disorder that add an unpredictable layer to urban life. We conducted multiple walk-by observations and behavioral mapping both during day and at night. The findings revealed two basic forms of temporal appropriation: economic and recreational. As a result, the research brought attention to how these temporal activities may represent the embrace of both individual and group spontaneity in passageways. Finally, this research aimed to bridge the gap between governmental strategic planning practices and the human-centered perspective in order to contribute to the formation of an alternative dialogue for future urban development of Downtown passageways.

Keywords: Appropriation, Spontaneity, Public Space, Downtown, Passageways
Introduction

Through the years, numerous urban studies scholars had highlighted the dynamism characteristic of urban spaces, as they are beyond an independent material reality or a "design intention from which the social effect will simply follow" (Soja, 1996; Shields, 1999; Gehl, 2011; Stanek, 2011). Despite different theoretical and empirical frameworks, numerous studies had shed light on the spontaneous character of the urban space where physical production is merely inseparable from human use and action. This discussion about the relationship between the planning and lived processes as well as the physical and social production of space requires an alternative thinking for urbanism studies. As a living human being, the user is spontaneously appropriating the space as they stroll around. Being creative actors, people are always figuring out their way to adapt to their environment and modifying the space that has been shaped for particular use and function according to their needs. In response, multiple studies have been conducted on this dialogue between the spatial and social aspects of the space by pioneer researchers of urban studies (Castells, 1977; Gotttdiener, 1994; Soja, 1996; Shields, 1999).

Many cities in the world have discovered the capability of pedestrian spaces in city centers to stimulate public life (Gehl, 2011). On the urban scene, the passageways are considered as a display scale of the daily life of the city, they are places where the user experiences the material and intangible elements of the city in different ways. They act as hidden places within the urban system of the city and unexpected places to be found in the dense streets as subspaces (Luz, 2006). They also can be very dynamic places, bringing many types of users together in one little strip of space, creating some very interesting corridors and nodes for the city (Fialko et al. 2009). As pedestrian spaces, these urban spaces support the discussion on linking the social and spatial realities (Jacobs, 1961).

In the case of Cairo, the passageways are one of the key elements of the urban morphology of the Downtown area. They represent the parallel network for accessibility and a pedestrian network where one can experience and enjoy city life (Nagaty, 2018). While several researchers studied Downtown passageways in terms of physical aspects, there is a lack of literature that tackles everyday spatial appropriation. Thus, this research aims to investigate the forms of temporary appropriation to shed light on the role of spontaneity in Downtown Cairo passageways. The study areas chosen for this research underwent numerous top-down strategic planning sessions throughout the years as a potential for a uniform public use, therefore, embodying the deliberate policies of urban planning and unpremeditated revelations of social life. They serve as a useful case study for examining the differences between the anticipated planned use of the space and the emergent practices that evoke spatial and socio-economic disorders and add an unpredictable layer to urban life. This study aimed to enrich the knowledge of temporary appropriation practices that are related to the Cairene passageways, and how they are crucial for maintaining socio-urban dynamics in the contemporary city.

Spontaneity and Public Space Temporary Appropriation

The discipline of urban design as we know it today was mainly born in the 1960s as a result of a desire to improve the quality of urban space, and in consequence, several approaches have been developed by urban studies scholars (Carmona, et al. 2010). In contrast to the orthodox comprehensive planning approaches, contemporary studies on public spaces have focused on the notion of how people utilize space and how they appropriate and inhabit the
city. These studies realized that people humanize urban spaces as they live and generate the social and physical layout of cities. For that, urban spaces are hoped to be places for spontaneous use where different activities take place. In the urban context, spontaneity is portrayed as a dynamic, open, and unmediated concept, and it is defined as urban actions performed without premeditation (Stevens, 2018). Additionally, the practices of temporary space appropriation represent spontaneous actions that shape the environment as well as the human process of perceiving urban space.

(Hernandez et al. 2017) define the appropriation of the built environment as an ongoing connection between people and the public space manifested via particular actions that contribute to the construction of the urban space. Furthermore, (Cruz, 2020) defined appropriation as an action in which someone takes something for their own without any approval from the authorized power. Therefore, public space appropriation is a process of spontaneous practices conducted by citizens, consciously or unconsciously, to manifest the struggle for the right to the city (Ibid, 2020; Ostermann et al. 2009). It is a socio-spatial demand innate to individuals and groups (Graumann, 1976).

In this study, the investigation of space appropriation is narrowed and specified by using the term ‘temporary appropriation’. Throughout the research, temporary appropriation is defined as actions conducted by people in the public space, actions that are different from the intended or originally designed use (Hernandez et al. 2017). However, we selected this specification to distinguish spontaneous appropriations from the designed use of space. Space appropriation includes a vast number of practices and could be observed in many ways, and it can be conducted by both individuals and groups on a variety of scales (Stanek, 2011). Although the forms of appropriation are varied and countless, temporary appropriation practices can be found in the forms of economical, recreational, or political activities, and religious, or cultural events.

![Figure 1: Temporary Appropriation Forms](Source: (Authors, 2022))

The economical temporary appropriation forms are referred to any type of activities that can be practiced in the public space by individuals or groups to gain financial benefit, whether it was directly or indirectly (Cross, 2009; Kim, 2013). However, those commerce or trade activities are usually conducted without the permission of the governmental authorities (Hernandez et al. 2019). Those activities can be found in terms of selling products such as food or clothes by vendors, by people who use the public space for advertising services, or by workers who try to attract possible clients by promoting their businesses (Cross, 2009; Ramirez-Lovering, 2008; Kim, 2013). Moreover, recreational activities such as singing, dancing, playing music, playing, or informally resting in a public space, are all examples of recreational temporary appropriation activities (Drummmond, 2000; Hernandez et al. 2017; Simpson, 2011; Stevens, 2018). Due to their participatory nature, those activities play a crucial role in the process of re-activating the public spaces of the city (Stevens, 2018).
In addition, many political theorists have argued and highlighted the importance of public spaces as an arena that can hold the citizens’ differences, values and gave them the chance to be part of deliberate decisions (Hernandez et al. 2017; Radwan et al. 2020). Thus, there is a direct relationship between the political changes and the public spaces in the city. One can see many political activities across public spaces, such as daily protests, rallies, manifestations of public opinion, or advocating for a certain cause (Radwan et al. 2020). Religious activities are another way people appropriate public spaces, however, this usually happens in countries with a rich religious heritage. This form of appropriation includes any activity that people practice in the public space for religious reasons, such as preaching or praying (Hernandez et al. 2019). Furthermore, city center public spaces are offering room for cultural events that can foster and enhance the livability of the city. Cultural events can serve as a meeting point for city strangers and improve socio-spatial harmony (Amin, 2008; Radwan et al. 2020; Southworth, 2014).

**Methodology**

Since this research is exploratory, a qualitative approach is the most logical option. As qualitative case study research excels at “telling the story” (Trochim, 2004), it allows the development of an in-depth understanding of an issue, including subjective understandings and interpretations (Marshall et al. 2006). This process helps to link the spatial and social characters of the urban space together. Therefore, focus on users’ lived experiences as they are structured on daily basis.

The data was collected through multiple walk-by observations, and they were conducted with the use of base maps for each passage, photographs, and annotated notes. During each observation, the researchers walked slowly in each study area and recorded the practices of temporary appropriation that were not foreseen or supported by the original plans yet still appeared through the everyday needs and motivations of people. Also, the observations took place during weekdays and weekends, at three different time slots during the daytime as well as three different time slots during nighttime.

<table>
<thead>
<tr>
<th>Passage Name</th>
<th>Weekend (AM)</th>
<th>Weekend (PM)</th>
<th>Weekday (AM)</th>
<th>Weekday (PM)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Al-Alfi</td>
<td>9:00-10:00</td>
<td>5:00-6:00</td>
<td>9:00-10:00</td>
<td>5:00-6:00</td>
</tr>
<tr>
<td></td>
<td>10:00-11:00</td>
<td>7:00-8:00</td>
<td>10:00-11:00</td>
<td>7:00-8:00</td>
</tr>
<tr>
<td></td>
<td>11:00-12:00</td>
<td>8:00-9:00</td>
<td>11:00-12:00</td>
<td>8:00-9:00</td>
</tr>
<tr>
<td>Al-Sherefeen</td>
<td>9:00-10:00</td>
<td>5:00-6:00</td>
<td>9:00-10:00</td>
<td>5:00-6:00</td>
</tr>
<tr>
<td></td>
<td>10:00-11:00</td>
<td>7:00-8:00</td>
<td>10:00-11:00</td>
<td>7:00-8:00</td>
</tr>
<tr>
<td></td>
<td>11:00-12:00</td>
<td>8:00-9:00</td>
<td>11:00-12:00</td>
<td>8:00-9:00</td>
</tr>
</tbody>
</table>

Table 1: The Schedule of Observations for Each Passage, Source: (Authors, 2022)

**Case Study: Downtown Cairo Passageways**

Walking through the streets of Downtown Cairo is a solitary experience, and it has a completely distinct flavor from everywhere else in Cairo. This district was planned through the vision of Khedive Ismail ‘Haussmannian Paris along the Nile’. It was a place where the élite and foreigners invested in royal residences and rich European architecture (Abdelhadi et al. 2009). However, over the last 50 years, the situation has transformed into a chaotic district that struggled with busy traffic in the main streets and street vendors in the secondary routes and passageways.
As a result, the awareness of the need for intervention in order to rehabilitate the modern business center has caught the attention of the Egyptian government as well as private developers in the 1990s (Ashour et al. 2020). The operation has focused on preserving and promoting the existing architectural and urban heritage of the city center. Additionally, in order to enhance public life, pedestrian zones that are constructed in the passageways of the city center have received attention (El-Kadi, 2012; Raslan et al. 2020). Downtown passageways are defined as one of the urban spaces typologies that takes diverse forms, scales, and qualities (Nagaty, 2018). They represent a parallel network away from the Downtown main streets’ noise, pollution, and crowdedness. Figure 2 shows the difference between the main streets grid and the passageways network.

Figure 2: Downtown’s Formal Street Grid (Left) and Passageways Network (Right), Source: (Nagaty, 2018)

Two pedestrian passageways were selected for the investigation, Al-Alfi and Al-Sherefeen. They are in two different zones in Downtown, as Al-Alfi passage is located in the Al-Alfi bey sector along with two other pedestrian passageways, namely Saraya Al-Azbakya and Zakaria Ahmed, Al-Sherefeen is located in Al-Borsa Triangle zone shared with Al-Qadi Al-Fadil passage and other small passages. However, these zones represent the concentration of the formally pedestrianized passageways and considered pedestrian hubs in the city center. Additionally, the social standard is different from one zone to another due to the land use and users’ diversity. While Al-Alfi passageway is known as a commercial attraction area, Al-Sherefeen, on the other hand, is kind of a financial spot where major financial institutions are located including the Egyptian Stock Exchange Building, Central Bank of Egypt, National Bank, and Suez Canal Bank. Along with the financial institutions, there are also other governmental buildings such as the Radio and Television Union. Due to this, it is evident that the authority’s power and control over the space is also varied from one passage to another.

Overview of Al-Alfi and Al-Sherefeen Passageways

Al-Alfi passageway used to be a major nightlife hub in Downtown. During the 1920s and 1930s, the passageway was frequently visited by European and elite customers seeking for entertainment. At the beginning of the 1930s, the commercial activities were started to take place in the passage, and this was the starting point of changing the Downtown area to a
diverse district. Both passageways consisted of substantial and historical commercial and residential buildings that dated back to the 1930s (Wahba et al. 2020). However, due to the negligence, the whole Downtown district was transformed into an overcrowded district with busy traffic streets and chaotic street vendors. In the 1990s, the Cairo governorate initiated 'Al-Alfi pedestrianization project' which included the western part of Al-Alfi street. It was celebrated as the first application of the pedestrianization approach for a more pedestrian-friendly city center. This development project included banning vehicles and passage refurbishment (Ashour et al. 2020). In 1999, Al-Sherefeen passageway was the focal point for the urban development intervention this time. The passage was upgraded by installing pavements on the streets, renovating buildings’ façade, and creating green areas. This was achieved by the Secretary of State for Governmental Affairs and funded by the private sector (Attia et al. 2017).

After 2011, a state of chaotic behavior has stormed all public spaces of Downtown, where vandalism and street vendors’ invasion led to an unfortunate deterioration of both passageways. However, it was only in late 2014 that the government decided to clear Downtown public areas from street vendors and any forms of illegal occupation aiming to restore order and derived by the sense of nostalgia to give back the Downtown area its lost identity (Ibid, 2017). Between 2014 and 2017, both passageways were formally upgraded, the vehicles were banned, again, and the passages were repaved, new passage furniture, infrastructure, and piping systems were installed, and planting trees along the passages. While Al-Alfi was redeveloped to be an active commercial hub with food and beverage stores as well as other service ones, Al-Sherefeen was introduced as a movement corridor that might host cultural events on weekends (Wahba et al. 2020). The illustrations in figures 3 and 4 show the map with land use, photos and basic information for each passage.
Results and Discussion

The observations revealed two forms of temporary appropriation, forms that are economical in nature or recreational. The analysis of the economical forms showed three temporal appropriation practices: informal vending, shoe cleaning, and shop territory extensions. For the recreational appropriation forms, there were two practices, namely: photography and skating. While the two forms of appropriations, economical and recreational were found in Al-Alfi, there were only recreational temporary appropriation practices that occurred in Al-Sherefeen passageway. Figure 5 shows the mapping of temporary appropriation practices of Al-Alfi and Al-Sherefeen passageways.

1. Economical Temporary Appropriation Practices

1.1. Informal Vending

The vendors were observed occupying the beginning of the passage and the intersection between Al-Alfi and Zakarya Ahmed. From a form-oriented perspective, connecting to other pedestrian passages, such as the intersection between Al-Alfi and Zakarya Ahmed increases the connectivity and visibility at the junctions, therefore attracting more customers. Physically, the street vendors seemed out of the plan and unfitting. Moreover, the street vendors tended to appropriate the public seats in Al-Alfi passage. They used the benches and the other seating forms to display their products, and this form of temporal appropriation was observed during nighttime as the passage was more active as illustrated in figure 6.
To understand what street vendors might mean socially, we observed those vendors for more time, then we noted the smooth flow of users who come either to buy or inquire about addresses which sometimes developed into casual conversations between people who appeared to be strangers. While they might be considered odd in the space, they are becoming a part of the passages' everyday reality. From the multiple observations on different days, we found that most street vendors were regularly present in the space in the same spot as shown in figure 7. Even if they were informal, they secured their territories in the passage.
1.2. Shoe Cleaning

In addition to informal vendors, there was another type of service informality observed in Al-Alfi passageway, which is shoe cleaning. The shoe cleaners were observed at the beginning of the passage, and this type of informality did not seem to break the routine of the movement of the passage, as it is considered a one-to-one service. The shoe cleaner does not occupy much area in the passage as illustrated in figure 8. His process does not require much equipment, as he only uses his small chair and a movable box that contains cleaning tools.

Figure 7: Same Informal Vendors Occupying Same Spots in Al-Alfi Passageway on Different Days and Time Periods (Left: Daytime) and (Right: Nighttime), Source: (Authors, 2022)

Figure 8: Shoe Cleaner in Al-Alfi Passageway, Source: (Authors, 2022)
1.3. Shops Territory Extension

Territorial markers that were found during the observations were particularly contributed to stationary activities in Al-Alfi passageway, which included the presence of seats from cafés and the display of products from various stores, as illustrated in figure 9. The spillover seating from cafés generated many seating activities, and the display of store products on the sides of the passageway invited people to stop, look, linger, and engage in buying activities. Though, Al-Alfi passage was originally designed with a clear territory boundary for each café and restaurant, including their legal outdoor seating extensions, the observations showed that most cafes did not obey those boundaries very much.

![Figure 9: Shops Territory Extension Including the Spillover Seating and Products, Source: (Authors, 2022)](image)

The business owners of cafés tended to maximize their seats outside the boundaries, and arranged them to face the passage. It was observed that many customers chose to sit in this area, and the reason behind this might be the feeling to be integrated within the passage's daily routine and not being fenced by any kind of boundaries. After all, in order to control territory, “people will modify their environment to better fit their needs” (Lang, 1987). Also, it was observed that this area was used for chit-chatting between different actors in the space. Passers-by were observed having conversations with customers, some of them seemed to know each other, while others seemed strangers and they were just asking customers for directions to specific destinations. This area was also used by cafes' employees, and they were observed sitting in order to be directly facing the passage. They were trying attract as many customers as they can by offering some discounts or briefly showing off their options for drinks and food.

2. Recreational Temporary Appropriation Forms

2.1. Photography

The photographers were observed in Al-Alfi passage only, they were scattered along the passage and concentrated on the intersection between Al-Alfi and Zakaraya Ahmed passages as well as on the passage edges. They were usually occupying the space in groups of two up
to four, as one is the photographer, and the others are mainly assistants. They were observed offering passage users their services and they were focusing on tourists as they might be more interested to be photographed and documenting a memory within a historical scene. While photography itself as an activity does not require a physical occupation in the space, the photographers’ existence, use of space, and their assistance in creating nested social settings along the passage, highlight the potential in urban space and contribute to the vibrancy of urban life.

2.2. Skating

Skaters are other prominent actors who were observed in Al-Alfi and Al-Sherefeen passageways. They were observed in the middle of Al-Alfi passage, and they were usually groups of teenagers playing together on the sides of the central space as they were trying to avoid the pedestrians' flow. However, they were more concentrated in Al-Sherefeen passage. In this passage, there is a whole community that is occupying a certain area on the passage almost every day. This community is created by individuals and small groups as they interact with the built environment in different forms and temporalities. What is quite interesting about this community is that it includes both genders from different age groups including teenagers, adults, as well as children. They compose a unity of rhythms and almost a harmony that is distinctive yet does not disorder the continuity of pedestrian movement.

While Al-Sherefeen passage did not have any public or commercial sitting options along the passage, the skaters tended to occupy an underutilized green area and use the physical boundaries to sit and wear their equipment or observe. This area of the passageway was transformed into a stage and a theatre, where viewers can choose to become performers at any time, as illustrated in figure 10. It became a social behavior setting where people gather, play, interact, and manage to use the neglected physical artifacts to facilitate and practice their activities. As Al-Sherefeen passage is mainly used as a transition corridor because it does not have any recreational or commercial activities, the skaters took advantage of this cons and un-expectedly transformed it from a purely transitional space to a recreational place. Eventually, it became known as a ‘skating place’ for many skaters around Cairo.

Figure 10: Skaters Occupying Al-Sherefeen Passageway During Nighttime, Source: (Authors, 2022)
Conclusion

The phenomenon of spontaneity is defined as a dynamic process and unpredictable when studied at a small scale such as in city center public spaces. Public places are directly altered by people since they are participatory settings through regular human activity, visual engagement, and attached values (Altman et al. 1989). There have been attempts by different actors to modify the passage environment to accommodate certain activities and meet their demands, despite the fact that the passageways in the two study zones have been upgraded and modified throughout time. The observations revealed two types of space appropriation, economical and recreational, that the user adopts or applies to the passage environment. However, neither passageway had any instances of temporary political, religious, or cultural appropriation. Worth mentioning Al-Sherefeen passageway was upgraded to host various cultural events (Wahba et al. 2020), the researchers did not witness any events during the observation periods. Figure 11 represents the temporary appropriation forms observed in study areas.

![Figure 11: The Forms of Temporary Appropriation in Al-Alfi and Al-Sherefeen Passageways, Source: (Authors, 2022)](image)

The scattering of vendors, products display, cafés furniture arrangement, and personalized physical elements, are important parts of the production of a lively and open space. Since they are easily arranging and rearrange, they can readily create visually complex and culturally distinct "passage-scapes" that express the cultural meanings associated with the specific uses. They are direct interventions on everyday aesthetics. Although the vividness of the recreational appropriation was not subjected to a legal or intentional design process, the user intervention that was observed and recorded seems to enrich urban life and bring a particular spatial appearance. The analysis highlighted the shifting of the passageway space from a movement corridor to a lively recreational place.

Temporary appropriation has been argued as emerging from local contexts out of the urban environment’s culturally driven relationships and dynamics. By shading light on the importance of human spontaneous interventions in urban spaces, this research attempted to minimize the gap between governmental strategically planning practices and the everyday use of Downtown passageways. Thus, helping to develop an alternative discussion considering the human-centered viewpoint for future urban development projects.
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Abstract
Globalization has been considered to be an integral aspect of how universities consider the profile of their graduates. Corollary to this, internationalization is considered to provide long-term stability through linkages and networking with premier schools in the country or abroad. The intent of this study was to determine the profile of internationalization or “internationality” of state universities and colleges (SUCs) in local provinces as to be at par with the universities and colleges in Metro Manila. The profiling could be an aid to other universities and colleges to uphold the challenges of internationalization of education. This qualitative study used the “Indicators for Mapping and Profiling Internationalization” or IMPI in gathering information on the level of internationalization of the state universities. The research included in-person interviews and focus group discussions with the participants in order to have a more holistic picture of the internationalization practices in the respective universities. Results indicate that there seems to be more room for “internationality” among these state colleges and universities in the aspects of Multi-faceted promotion of International Affiliation and Internationalization of the University Curriculum. Future research can look further into the “process” of internationality of the state universities and colleges. This can in turn highly shed light on how these universities reach a high level of internationalization.

Keywords: Internationalization, Higher Education Institution, Globalization
Introduction

Globalization has led to making institutional changes in higher education which led to the posed effects on the school culture and the school management (Deem & Brehony, 2005 as cited in Delgado-Marquez, Hurtado-Torres & Bondar, 2011). Some of the most evident changes are in the extent of the activities, as the school should extend its boundaries beyond national borders. The next set of goals that higher education institutions aim apart from institutional activities align with sustaining the programme and organizational strategies. With this, the government support for an effective partnership with universities worldwide.

Internationalization of Education

Globalization is an intricate process of crossing borders, merging markets, and internationalizing commodities which is highly endorsed by technology. Because of the commanding economic changes and the sudden surge of competition in the academic sphere, schools must strategically place themselves at the forefront of the global market. Internationalization of education means academic institutions must alter their structures, diversify their curriculum, and prepare their students for the demands of the current market. According to Knight (2003) (as cited in Wit, Jaramillo, Gacel-Avila & Knight (2005), internationalization is “the process of integrating an international, intercultural, or global dimension into the purpose, functions, or delivery of postsecondary education” (p. 19). The given definition is quite encompassing but may vary from institution to institution on how it can be propagated. Internationalization is a process of forging strategic partnerships for long-term stability. It is also a continuing and ongoing process of providing academic mobility for students and faculty. Another important aspect of internationalization is integrating and infusing international dimensions into the school system and curriculum. Thirdly, the purpose of internationalization is to create objectives and outcomes that will better promote an institution in the international arena.

Elements of Internationalization in Education

Institutional Commitment

According to Stinson (2010), the Inter-organizational relationship theory (IOR) dictates that institutions must have stated goals to create international partnerships. Institutions must also be ready to imbibe internationalization. Also, there must be a structured evaluation process for its international activities. In addition, according to McCormack (2013), presidents must ensure that students are engaged in global issues. Most importantly, there must be internal cohesion and strategic partnerships in order to sustain its international projects.

Administrative Support

Apart from the institutional commitment by the school in the form of its mission and vision, it is the university leader, particularly the school president or the senior international officer (SIO), that is the one that serves as the one who initiates university goals. According to the Center for Internationalization and Global Management (2017), the president and the senior international officer have received their diplomas outside the country. They are the ones that oversee a multitude of international activities and report to the chief academic officer (CEO).

Curriculum and Learning Outcomes

Institutions must first define what an internationalized curriculum means in their context. This may mean how the students can achieve global learning. Moreover, it can also help by
identifying in what mode of study will it be feasible for students. This can be either on campus work or done abroad. The school may also define how the curriculum will help the students achieve the attitudes and skills needed for global learning. These must be articulated in the learning outcomes and must then decide on the curricular timeframe for these to be achieved.

**Faculty Involvement**

Faculty members' buy-in and engagement in internationalizing the curriculum is integral in the planning and implementation phase of curricular change or adaptation. The Chief International Officer or the Senior International Officer often needs a faculty committee or an advisory group that will focus on internationalization initiatives. The faculty and other administrators can serve as a part of the succession planning for the next set of leaders. According to Cornelius (2012), faculty involvement shows deep commitment to supporting the university’s internationalization initiatives. Schools also encourage faculty to join and present at international conferences and lead students in collaborating with other schools abroad. According to the American Council on Education (2012), faculty are encouraged to study and conduct research abroad.

**Student Mobility**

According to Dewit (2015), the foci of national strategies involve student mobility, short or long term economic gain, talent recruitment, and international positioning. However, he suggests that educational administrators must focus on internationalizing the curriculum and enhancing the quality of education. Educational administrators must ensure the quality of their faculty, their students, and their curriculum so that when given the opportunity to have exchange programs, students can easily compete with universities abroad. In the same way, educational administrators must continually ensure the visibility of the school in all industries to have continuous business contacts and foster more entrepreneurial activities.

**Collaboration and Partnerships**

Based on the readings on leading and managing higher education institutions, it is essential to make strategic partnerships and alliances with potential funding organizations and or business contacts. In addition, an institution must evaluate the vision and mission and how international practices can be evaluated. Moreover, faculty must be provided with incentives and provided with the right resources, such as training and access to technology, in order for them to actively engage in international or transnational activities. Students are to be immersed in global issues in order for them to understand the complexities of competing in a globalized world. Most importantly, school leaders must create long term strategic planning and management of human resources in the assignment of roles and responsibilities.

**Internationalization of State Universities and Colleges**

Universities who aim for international recognition are starting to pay attention to global rankings. Internationalization requires that there should be an increased number of international students, international staff, and international co-authorized publications. A higher education institution that engages in internationalization aims to produce global citizens and professionals. In addition, it promotes cultural awareness and must immerse its students, faculty and staff in global issues. The essential areas of internationalization include academic mobility, internationalization of the curriculum, internationalization of research, providing borderless, offshore, and transnational education, development cooperation; and forming strategic partnerships. Furthermore, we cannot underestimate the power of rankings
to influence the opinions of the stakeholders of higher education institutions. National governments have become more reliant on these rankings in shaping policies on education. Advocates “argue that in the absence of sound and comparable information, rankings are the best option for determining the quality of colleges and universities” (Marmolejo, 2015). Doing well in rankings may mean big bucks for the higher education institution since international students consider them in their choice of schools.

Countries are working towards making their educational systems globally competitive. However, most countries are faced with challenges. In Latin America, public universities are subsidized through taxes. The efforts of increasing student payments have met a lot of contention (Wit, Jaramillo, Gacel-avila & Knight, 2005). The Hong Kong, Japanese, Singaporean, Taiwanese, South Korean, and Mainland Chinese governments have engaged in actively improving the quality of education (Mok, 2008b as cited in Ng, 2011). Singapore and Hong Kong have aimed to establish themselves as educational hubs and as ‘Global Schoolhouses’ (Ng & Tan, 2008). However, according to Ng (2011), there is a danger in considering Western educational systems as better or as more prestigious. Ng states that countries must not compare their own local and domestic needs to world standards.

**Internationalization of State Universities and Colleges in the local context**

Internationalization is one of the main thrusts of higher educational institutions in the Philippines. With internationalization as the catalyst of globalization, the educational system in the Philippines, particularly the higher educational institutions, are required to be more creative and entrepreneurial (Lupdag-Padama et al., 2010). Lupdag-Padama et al. (2010) add that internationalization is highly integrated into the operations of the educational institutions in the National Capital Region. The Philippines provides a nurturing environment for international students but feels that they receive certain forms of discrimination in financial transactions based on their language proficiency and their housing needs based on their nationality (Wa-Mbaleka & Gaikwad, 2013).

This study aims to look into the internationalization status of two premier state universities in Region 1, namely Pangasinan State University and Don Mariano Marcos Memorial State University. The strategic goals of Pangasinan State University are to promote excellent student learning and career development, (2) to develop a strong research culture and technology transfer, (3) good governance, (4) to imbibe sustainable social responsiveness, (5) to foster quality human resource management and development and lastly (6) to urge customer focus. Some of their best practices include educational facilities development, benchmarking activities and strengthened international ties.

Don Mariano Marcos Memorial State University (DMMMSU), according to its founders, was established to cater to the aspirations of the people. The University has three (3) major campuses located in different towns in the province of La Union. Like Pangasinan State University (PSU), DMMMSU is considered a premier university in Region 1. Their pursuits include agricultural development, community involvement, research, and strategic partnerships. As they embrace world class standards, the university integrates internationalization activities into their organizational structures. Leadership and management also highly support global learning in order for the students to be capable of working in a global society.
According to Knight (2012) internationalization can affect different aspects of the higher educational institutions through the following: Curriculum and Instruction, Facilities and support system, research, raising academic standards, promoting professional development, national and international linkages and mobility and exchanges for students and teachers. These aspects are important to reach the level of internationalization aspired by the institutions in the study.

**Methodology**

**Research Design**

The study utilized a qualitative approach to inquiry, to create an in-depth understanding of how state universities and colleges (SUCs) in Region 1 pursue their thrust on internationalization. This case study is "an examination of a specific phenomenon such as a program, an event, a person, a process, an institution, or a social group" (Merriam, 1988, p. 9 as cited in Willis, 2007). With the primary foundation of this kind of study, the interaction with the participant is imperative as it studies in natural settings and attempts to make sense or interpret phenomena in terms of people and their surroundings. Stinson (2010) mentioned in his study that case studies initiate suggestions to inform practice when it comes to studying educational programs. Through examining educational processes, problems, and programs, it could bring about an understanding that in turn could affect or even improve practices. Thus, case studies (Merriam, 1998; in Stinson, 2010) have been proven useful for studying educational advancements, for critiquing programs, and for informing policies and practices. The intent of this study was to determine the profile of internationalization among SUCs in local provinces to be at par with the universities and colleges in the metro. The profiling could be an aid to other universities and colleges to uphold the challenges of the internationalization of education.

**Study Sample**

As the study sample was restricted to a very specific population of state colleges and universities in Region 1, with clear partnerships in international settings and which considered internationalization as an important part of their strategic plan, Don Mariano Marcos Memorial State University (DMMMSU) in La Union and Pangasinan State University (PSU) in Pangasinan were categorized as the purposive sample. In addition, the universities were chosen to be part of the study as they were recommended by the Regional Director for the internationalization of their educational practices.

**Instrument**

The primary research instrument utilized in the study was a questionnaire based on the Japanese indicators list (Beerkens et al., 2010) profiling and mapping internationalization. This is the IMPI or the Indicators for Mapping and Profiling Internationalization. This is the product of the major study conducted at Osaka University in Japan. Furushiro (2006) conducted a major study focusing on the development of evaluation criteria to assess internationalization, which identified eight main categories, namely: (1) Mission, goals, and plans of the university, (2) Structures and Staff, (3) Budgeting and Implementation, (4) International Dimensions of Research Activities; (5) Support system, information provision, and infrastructure, (6) Multifaceted promotion of international affiliation, (7) Internationalization of the University Curriculum, and (8) Joint programs of external
organizations. Through using these indicators, an institutional self-evaluation was conducted to cater the holistic view of a university when it comes to internationalization. Hence, DMMMSU and PSU, based on its correspondence to the aim of the current study, are likely to respond to the Japanese indicators and are deemed appropriate for the study.

Data Collection and Analysis

To better understand the internationalization of DMMMSU and PSU, site visits to each institution were imperative as the researchers conducted focus group discussions (FGDs) and panel interviews. The FGD and panel interview were guided by the questions provided from the Japanese indicators list, recorded and later transcribed to provide the necessary data to be analyzed and interpreted. Prior to the site visit, browsing of the DMMMSU and PSU’s official websites was deemed helpful in gathering the preliminary data.

The researchers (Merriam, 1998; in Stinson, 2010) are the primary instrument for gathering and analyzing data in a qualitative study, as it can respond to the situation of maximizing opportunities for collecting and producing meaningful information. The data from the interviews and FGDs were recorded digitally, transcribed and organized to provide a clearer interpretation of the internationalization profile of DMMMSU and PSU based on the given indicator list.

Results and Discussion

Based on the IMPI indicators for mapping and profiling internationalization, the following elements were analyzed of SUCS in Region 1.

Mission, goals, and plans of the university

As institutional commitment to internationalization was deemed necessary for the studied state universities in Region 1, the scope of their visions were defiant, as PSU focused itself on becoming an ASEAN premier state university in 2020 while DMMSU stretches in a more global perspective. Both with a mission of providing relevant quality instruction, research, and extension in their respective universities, it is indeed clear that these universities are aiming for globally-competent individuals.

More specifically, PSU caters much specific international realizations, such as perpetuated by partnership, strengthened by synergy, and unbound by time and space. These realizations are much more achieved through PSU’s establishment of an International Affairs Office fostering international partnerships and linkages which enables the growth of PSU as globalized academic institution.

With regard to the administrative structures present at PSU and DMMMSU, the universities both assigned a Director of International Education or a Director of International Affairs and also the Director of International and Local Affairs. The administrative structures in the universities show that they act independently from the school president. They are under the Vice President’s office and they have a specific role of being responsible for getting the right people together for internationalizing the curriculum. They were responsible for putting together other key academic staff. They also mentioned that the individuals invited were prepared to debate on important issues and come up with a shared understanding. As the “head” or key player in internationalization in the universities, they needed to be able to
facilitate planning of the content of the curriculum, activities that related to teaching and learning and in assessing the program. The Directors are considered to be heavily involved especially in the early stages and invites continuous dialogue and discussion. The directors also choose key stakeholders and propose a specific timeline for the implementation.

With regard to the establishment of medium and long term plans and strategic goals, the university actively concretizes the vision and mission. PSU focused itself on becoming an ASEAN premier state university in 2020 while DMMSU stretches in a more global perspective. This is articulated in the strategic plan of the schools. Due to Data Privacy issues, the participant school can only disclose public documents. However, the plans are disseminated in the school newsletter. Specifically, it is announced in the school newsletter that they aim to achieve their vision of PSU “gears to achieve International Sustainability Assessment, Investors in People and Philippine Quality Awards.” Likewise, they also have an Orientation Program on Internationalization. PSU also presents research at international conferences, specifically “International Science, Social Sciences, Engineering and Energy Conference” (ISEEC 17). Their Chorale Group will be competing in Vietnam. The university makes it a point to share with the community their plans and encourage the other stakeholders to join in the mission. The university stakeholders show some level of recognizing the vision and mission. They are consistent and aligned with the general policies and plans of moving towards being more international. It may be said that the implementation body and the staff are invested in being connected to more Southeast asian countries through conferences and school events.

In the area of campus community support, stakeholders are encouraged to make opportunities to meet outside potential stakeholders and partners. Through the PSU Global Gateway Project, the university aims to encourage conversations and discussions for deeper partnerships and collaborations. PSU welcomes more international students and would like to “serve as the central information hub for international foreign students.” This is a part of their PSU Global Gateway Project. It is also in their plans of setting up a gateway for international students and faculty to have an exchange program and do more research collaborations on major global issues. Also, the affiliation center aims to foster more international agreements, internships and more international partners for the university. For DMMSU, they hosted an international conference so they can encourage sharing of knowledge and pedagogy to spark more international exchange of views.

**Structures and staff**

In the area of structures and staff, the members of the international committees and established offices received their doctorates from foreign universities. Due to data privacy, any details about the members were concealed from the researchers. However, the detail extracted from the data gathering, no matter how limited, can say so much about the goal of the institutions to become internationalized. First, adapting a more global perspective is the new norm to address the growing demands for an intercultural dimension in learning and opportunity for the stakeholders. Next, students are more adept than ever to engage in a global workforce and this element becomes a primary consideration prior to enrolment. However, it may be more complex for some institutions to integrate seamlessly, which makes this aspect harder to address in terms of changing “the internal dynamics to respond and adapt appropriately to an increasingly diverse, globally focused, ever-changing external environment” (Ellingboe, 1998, p. 199). Thus, this aspect is highly tied with programs and
plans involve a more multicultural curriculum and a stronger international exchange programs which will be discussed in the next sections.

**International dimension of research activities, Achievements of research presentation, International Development of research activities**

The aforementioned universities were able to do collaborative research and publications with foreign universities. DMMMSU particularly was able to do an inter-university sustainable development research programme with Manchester, United Kingdom. With regard to the international development of research activities, at PSU, two faculty members were sent to Japan for collaborative research. For DMMMSU, they collaborated on a funded research project on “Academic Institutions Mobility in the ASEAN Region through Sharing of Best Practices in Sustainable Development”.

Given all these, there is a lack of students’ perspectives which could strengthen the effectivity of these research activities in their growing competence. It must be noted that these research activities in the form of publication and presentation have to equip the students with skills and knowledge to become more academically mobile in solving gloabl challenges and opportunities.

**Support systems, information provision, and infrastructure**

For the support systems, PSU was able to accept visiting professors and ensured accommodation for 28 international students in their hostel in the Bayambang campus. At PSU, the university made sure that there was a buddy system for foreign students. As infrastructure is a consideration with the inactive participation of the government in terms of budget, most institutions find it hard to accommodate international students. This disable them to go full blast in their programs for a more diversified intercultural learning.

For the infrastructure, PSU planned the construction of a five-story hotel, which will serve as the ASEAN PSU Convention Center. Likewise, DMMMSU also planned for the construction of a 50 million peso international convention center on university grounds, aided by their local government. The said infrastructure plans by the universities were both for the benefit of the local and international students.

**Multi-faceted promotion of international affiliation**

PSU was able to engage in several multifaceted inter-university international affiliations and even local community linkages. PSU are affiliated with the following: (1) Asian Association for Interdisciplinary Research, (2) National Association of Educators of Young Children, (3) Asian Association for Academic Integrity, (4) IAMURE Multidisciplinary Research, (5) Asian Society for Teachers of Research, and (6) International Association of Research Ethics Across. In addition, PSU’s community linkages are deepened through the sharing of expertise in the application of coral transplantation technology and commercial scale mud crab hatchery. These activities are done in order to transplant the asexually reproduced corals in the seabed of Hundred Islands National Park (spearheaded by PSU Binmaley - COE in Fisheries).
Internationalization of the university curriculum

In the area of internationalization of the curriculum, the language programs of the two universities include: the English Language Proficiency Program for Korean students at Pangasinan State University. For the Internationalization of specialized education, at DMMMSU, they have a 12 month student internship abroad program. Two students from the Bachelor of Secondary Education major in English completed their internship from July 2017-2018. They also had two education students from Pibulsongkram Rajabhat University, Thailand enroll in English for Specific Purposes and Conversational English from June 6, 2017-July 31, 2017.

This shows that the two schools show much interest in collaborating with different schools to be able to gather data and information and be able to hopefully create more research. The language programs were able to house different nationalities in order to broaden the perspectives of the students. They were able to integrate their lessons in their specific degrees in order to enrich their mindset. This has led the students to be more globally aware of what is happening in the outside context. They were not limited to the knowledge garnered from their professors or fellow classmates but were able to show that knowledge can be drawn from international students and exchange experiences.

Joint Programs with External Organization (Academic Exchanges, Internships and others)

With some HEIs still struggling to find and develop programs that would work in their context, the most logical place to start would be on language education programmes or exchange programs. However, those HEIs investigated in the study seem to have more in place such as having joint programs with external organizations, academic exchanges, internships, and others. There were issues that arise every now and then but nothing too broad that cannot be addressed. Some of these issues are general, such as the crediting of units.

As regards the educational exchange, the summary of details can be found in Appendix A. Apparently, the exchange programs became the strongest foothold of most institutions to achieve internationalization with DMMMSU having more programs in place and PSU not being far behind. The next question is, will the number of programs be enough to establish a more global perspective? Reiffenrath (2021) stated that this is just one way of internationalising the curriculum and providing all students with an international experience. Thus institutions should work on just having educational exchange more so when these international curricula are not “research-oriented teaching, problem-based learning, project- or practice-oriented teaching or service learning” (para. 3).

Conclusions and Recommendations

The internationalization of higher education in the participating state universities has proven to be in its initial stages but has proven to be very aggressive in achieving its vision and mission of being able to compete on a national and global level. This research is but a start of the status of internationalization in Region 1. Further research must include creating more academic profiles of universities in the Philippines. Since the study has used the Japan Indicator List, future research can also make use of the other indicator lists in order to see which one is more appropriate and for interested researchers to look into. Finally, since internationalization is embedded in the educational system, educational managers must be
able to strategically align themselves with companies and institutions that can help them be more sustainable in the long run. Overall, there is an obvious need for HEIs to look more closely to other aspects such as research to achieve a more developmental agendas for internationalization.
References


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Appendix A

Indicators for Mapping and Profiling Internationalization

The Japanese Indicator List

Note: Bold fonts indicate the evidences of Internationalization

Mission, goals, and plans of the university

1. Official statements regarding the internationalization of the university

   PSU’s vision: To become an **ASEAN Premier State University** in 2020

   PSU’s mission: The Pangasinan State University, through instruction, research, extension and production, commits to develop highly principled, morally upright, innovative and **globally competent individuals** capable of meeting the needs of industry, public service and civil society.

   PSU’s **International Realization**
   Perpetuated by Partnerships
   Strengthened by Synergy
   Unbound by Time and Space

   PSU’s **International Affairs Office** is responsible in **fostering international partnerships and linkages** and initiate the development and growth of PSU as a **globalized academic institution**

   DMMSU’s vision: A premiere and **globally-competitive** university

   DMMSU’s mission: Provides relevant quality instruction research and extension

2. Responsible administrative structures

   **DMMSU**
   - Dr. Joanne D. Villar, **Director of International Education & ETEEAP**
     - one of nine directors under the Vice President for Academic Affairs, who himself is one of four Vice Presidents under the President
   - Dr. Joanne C. Rivera, **Director of International Affairs & Linkages**
     - one of seven directors under the Vice President for Planning and Resource Generation

   **PSU**
   - Dr. Sally A. Jarin, **Director of International and Local Affairs**
     - one of fifteen directors under the Vice President for Academic Affairs, who himself is one of four Vice Presidents under the President
3. Establishment of medium-and long-term plans and strategic goals

**PSU**

- PSU Echoes (Official Publication of PSU, Jan to April 2017 Issue)
  - front page, minor mention - PSU “gears to achieve **International Sustainability Assessment, Investors in People and Philippine Quality Awards**”
  - page 3 article - **Orientation Program on Internationalization**
  - page 5 article - PSU Educators present researches at **I-SEEC 17 (International Science, Social Sciences, Engineering and Energy Conference)**
  - page 15 article - Caboloan (Chorale Group) to **compete in Vietnam**

- The PGG Project (PSU **Global Gateway** Project)
  - To serve as the central information hub for **international foreign students** who wish to enroll and earn a degree in PSU and provide campus community support as they adjust to their new life in the Philippines;
  - To set up a Gateway for each country where **the international partners are located to facilitate the recruitment of international students and faculty**, set up procedures and policies for the student/faculty exchange program and other research collaborations on **major global issues**; and
  - To establish an Affiliation Center which will help facilitate the development of official **International agreements** to enhance collaborative instruction, creation of **international internships** for local PSU students and coordinates the visits of the **International partners of the University**

**DMMSU**

- Website (www.dmmmsu.edu.ph)
  - Search keyword - International - 9 results found
    - **4th International Conference on Equal Educational Opportunities**
  - Search keyword - Internationalization - 1 result found
    - **DMMMSU-China Education Linkage Forged**
  - Search keyword - Global - 5 results found
    - **Going Global! (With the Global Consulting Group from Dhaka, Bangladesh)**
Structures and Staff

1. Organizational structures for operation

DMMMSU
❖ The three VPs whom we interviewed were all had their doctorates in foreign universities

International dimension of research activities

1. Achievements of research presentation

DMMMSU
❖ Inter-University Sustainable Development Research Programme, Manchester, UK
Publication related to sustainable development

2. International development of research activities

PSU
❖ Two faculty members to be sent to Japan for collaborative research

DMMMSU
❖ Japan-ASEAN Science, Technology & Innovation Platform, University of Tokyo
Funded research project on “Academic Institutions’ Mobility in the ASEAN Region through Sharing of Best Practices in Sustainable Development”

Support system, information provision and infrastructure
(Entrance examination, education, housing, multilingual aspects and the environment)

1. Support system for international researchers and students

PSU
❖ Visiting professors stay for not more than one month
❖ Accommodations for twenty-eight international students in their hostel in the Bayambang campus

2. Daily support for international students and researchers

PSU
❖ Buddy system for foreign students

Multifaceted promotion of international affiliation

1. Inter-university affiliation (International Membership/Affiliation)

PSU
Asian Association for Interdisciplinary Research
Asian Association for Academic Integrity
IAMURE Multidisciplinary Research
Asian Society for Teachers of Research
International Association of Research Ethics Across Disciplines

2. Linkage with local community

PSU
- Sharing expertise to the community in the Application of Coral Transplantation Technology and Commercial Scale Mud Crab Hatchery for the transplantation of Asexually reproduced corals in the seabed of Hundred Island National Park (PSU Binmaley- COE in Fisheries)

*Internationalization of the university curriculum*

1. Language program

PSU
- English Language Proficiency Program for Korean students

DMMMSU
- Vision and Spirit for Overseas Cooperation, Tokyo, Japan
  Japanese learning training for Bachelor of Science in Information Technology students

3. Internationalization of specialized education

DMMMSU
- 12-MONTH Student Internship Abroad program. Two students from the Bachelor of Secondary Education major in English completed the internship (July 2017-July 2018)
- Pibulsongkram Rajabhat University, Phitsanulok, Thailand
  Two education students from PSRU enrolled in English for Specific Purposes and Conversational English (June 6, 2017 - July 31, 2017); Two business English students From PSRU enrolled in English for Specific Purposes and Conversational English (March, 2017-May, 2017)

*Joint programs with external organizations (academic exchanges, internships, and others)*

1. General issues regarding international programs

PSU
- Southeast Asia (SEA) Teacher Project
  Credited 3 units of International Exposure, producing globally competent individuals
2. Educational exchange

DMMMSU
- Kangwon National University (KNU), South Korea
  4-month student exchange, one Bachelor of Science in Information Systems student (Feb - June 2017)
- Universities of Indonesia - Philippines - Thailand “Pre-Service Student Teacher Exchange in Southeast Asia” (SEA-Teacher Project)
  1 month student exchange, four Indonesian students stayed at the North La Union Campus under the College of Education, Laboratory High School
- Universitas PGRI Semarang, Indonesia
  Academic, Cultural and Scientific Thought and Personnel Exchange
- Thai Nguyen University of Agriculture and Forestry, Quyet Thang Commune, Vietnam
  Six-month Student Internship Abroad Program; Four students from the Bachelor of Secondary Education major in English finished the internship (May 25, 2017-November 10, 2017)
- The Bridge, Dhaka, Bangladesh
  Twenty-four government officials from the Ministry of Education made an International Study Tour on Secondary Education major in English and Mathematics (November 26 to December 7, 2017)

PSU
- Two faculty members to study Masters in International Teaching in Korea
- Two faculty members to train in Science Teaching in Japan
- SEA Teacher Project
  24 pre-service student teacher participants in Indonesia and Thailand (2017)
  9 pre-service student teacher participants in Indonesia and Thailand (2018)
  28 pre-service international student teacher participants from Indonesia and Thailand (2017)
  27 pre-service international student teacher participants from Indonesia and Thailand (2018)
- SEA - Technical and Vocational Education and Training
  25 tech-voc international student participants from Indonesia, Thailand, Cambodia, and Vietnam
  21 tech-voc PSU student participants sent to Indonesia, Thailand, and Vietnam

3. Evaluation of joint programs with other universities

PSU : International Linkages
- Chuo University, Tokyo, Japan
- National Chiayi University, Chiayi City, Taiwan
- Tainan University of Technology, Tainan City, Taiwan
- Prince of Songka University, Songkla, Thailand
- National Pingtung University of Science and Technology, Pingtung, Taiwan
- Maejo University, Chiang Mai, Thailand
- Soka Gakkai University, Japan
- University of Malaysia, Perlis, Malaysia
Phranakon Rajabat University, Bangkok, Thailand

PSU: 2nd International Academic Summit
❖ Intends to convene representatives from HEIs of the ASEAN member countries, benchmark on current initiatives of HEIs in the different ASEAN member countries on the implementation of various international partnerships and linkages and create opportunities for possible collaborations, partnerships, and linkages of Philippine HEIs with participating ASEAN HEIs

DMMMSU
❖ Students who got teacher training in Vietnam benefited and became better graduates.

Others

PSU
❖ Construction of the ASEAN PSU Convention Center (five-story hotel)

DMMMSU
❖ Construction of a 50M-peso International Convention Center on University grounds with the help of the LGU
The Reconstruction of Rural Places Through Paper-Cutting Art: 
A Case Study of a "Paper-Cutting Village" in Fujian Province, China

Wenxia Jia, Fujian Jiangxia University, China

Abstract
Xuelingwei is a village in Zhe Rong County, Ningde City, Fujian Province, China, which is renowned as the "paper-cutting village." The village can be regarded as an "overall space" from a spatial sociological perspective. In my research, I examined the spatial practices of the paper-cutting village of Xuelingwei based on participant observation and interviews with local paper-cutting inheritors, practitioners, villagers, government staff, and tourists. I discovered that through the cultural practice of paper-cutting folk art, Xuelingwei village is endowed with multiple spatial connotations. In the process of spatial socialization, the art of paper-cutting is gradually integrated into the villagers' daily lives. The village space is continuously enlarged, altered, depicted, and reproduced based on the perception, selection, and active practice of various spatial mechanisms. Through new village space such as rural paper-cutting museum, oil painting gallery, or activities like workshops, paper-cutting courses for villagers, paper-cutting experiences and souvenirs for tourists, and so on, paper-cutting art promotes the construction of the relationship between people and rural space, becoming a new way to investigate the reproduction of rural space and a reasonable effort to revive traditional folk art.

Keywords: Paper-Cutting, Folk Art, Rural Space, Spatial Reproduction
Introduction

This research is based on the background of Chinese intangible cultural heritage protection rural revitalization. These national policies have made it possible for the countryside to undergo tremendous changes that extend into space. Urban space is increasingly expending into the countryside. The reorganization of urban spatial structure has occurred, affecting the inherent form of rural space, and social transformation has involved villages in the process of spatial production and reproduction.

Market-driven industrialization and urbanization have led to a macroscopic tendency for the spatial structure of villages to increase in size, decrease in number, and vary significantly in staggered density, with hollow villages co-existing with some super villages in the spatial configuration. With the existence of many hollow villages in rural China, the loss of use of rural space and its reproduction is quite urgent.

Changes in the space of rural social relations, the decay of rural public space, and the impact on the micro space of interpersonal relations.

With current rapid development of digitalization, the influence of media and technology on spatial relations; many villages have neglected the function of real space when investing in the construction of various virtual digital spaces.

Many villages are uniform in spatial transformation and production, imitating and transplanting, lacking the support of spatial cultural elements to be attractive and vital; there are also many misconceptions in the path selection of culture + revitalization.

Therefore, based on these backgrounds, This study of rural space is a synthesis of spatial research from the perspective of the state society, spatial analysis from the paradigm of daily life and spatial research from the perspective of rural governance (Lei lin, 2021).

The research summarises case studies and distills an extensible theoretical framework. The study also provides a new perspective on the understanding and perception of the current development and function of intangible cultural heritage.

In the village of Xuelingwei in Ningde City, Fujian Province, the national non-traditional heritage of paper-cutting in Zhe Rong is used as a rural culture to develop rural cultural tourism and revitalization strategies, in the process of which the rural space of Xuelingwei is also reproduced. Based on Henri Lefebvre's triadic model of social space, this research analyses in detail how the intervention of paper-cutting, an intangible cultural heritage, has changed the state and structure of space at three levels: perceptual space, conceptual space and living space. This study is based on the triadic model of Henri Lefebvre's social space.

This study places rural intangible cultural heritage and traditional cultural art (paper-cutting as a case study) in the context of social space, providing an analytical framework to generate a new perspective for understanding and perceiving the current development and function of intangible traditional art. At the same time, in the process of analyzing how the folk paper-cutting in the village of Xuelingwei interacts with the three spaces, the scope of spatial theory interpretation is expanded on the one hand, and a new mediated vision is derived on the other. The study also provides a new perspective on the understanding and perception of the current development and function of non-traditional traditional arts.
Research questions

My study starts with research questions as follows:

- Does the integration of paper-cutting as a cultural core into industrialization have an impact on rural space? What kind of influence does it have?
- How can this influence be better interpreted to the spatial triad theory?
- How can intangible cultural heritage play a role in the development of rural spaces?

Theoretical Framework of this research

The theoretical framework that supports my study is: Henri Lefebvre's Sociological Space Theory---“The production of space”. In The Production of Space, Lefebvre first introduced his core categories of the spatial triadic dialectic:

- Spatial practice. It encompasses production and reproduction, as well as the particular place and spatial characteristics of each social form. The continuity and extent of this union is reinforced in spatial practice in social space and every relationship between society and space.
- Representations of space. This is closely linked to the relations of production, to the "order" that affects these relations, and thus to knowledge, symbols, codes and "frontier" relations.
- Representational spaces. It is the concrete expression of a complex system of symbols linked to the hidden side of social life (Lefebvre,1991).

Methodology & Data Collection

I use methodologies like participant observation, narrative inquiry and in-depth semi-structured interviews to collect data. It is worth exploring the mechanisms and pathways of the role of intangible cultural heritage in reproducing rural space in rural development. Through qualitative research methods, the changes in rural spaces based on paper-cutting and the detailed interpretation of spatial theories are obtained, to generate new ideas for the developing of rural spaces and intangible cultural heritage.

For instance, I interviewed Wu, the village branch secretary of Xuelingwei: "At the outset of the formation of the paper-cutting village, our two village committees encouraged every household to participate in reacquainting themselves with the intangible cultural heritage of paper-cutting. Every Saturday evening, the village branch invites paper-cutting experts to teach people how to cut paper, and all villagers are encouraged to attend. In order for our town to promote paper-cutting as a specialty, we must first comprehend and appreciate the non-heritage culture of paper-cutting." With this in mind, the village management supported the paper-cutting classroom activities, and the villagers participated in the course from a wait-and-see state to taking the initiative to break barriers and participate on time at a later stage, laying the groundwork for the villagers' exposure to, appreciation of, and recognition of the art of paper-cutting, as well as its active promotion.

Conclusion

As a result of the intervention of paper-cutting art, the cultural tourism industry in Zhaolingwei Village has a cultural core and support, the cultural tourism experience of
tourists has been enriched, and the financial income of Xuelingwei Village has been significantly increased, which constitutes a significant experience for the revitalization and development of Xuelingwei Village from the perspective of culture-led long-term economic development.

Alternatively, the transmission of paper-cutting intangible cultural heritage as the primary image and characteristic of the village has a greater potential to raise the awareness of Zhe Rong paper-cutting intangible cultural heritage and to discover the expansion and extension of intangible cultural heritage in its existing activities.

The residents' way of life has altered drastically, and the village space has been recreated. This series of changes prompted by the involvement of the paper-cutting intangible cultural heritage is significant for study both as a novel path and method for the development of the transmission of intangible cultural heritage and as a new experience of changes in the village's residents and organisational structures.

My research indicates that paper-cutting has had a significant impact on the village space's expansion. As a result of the spatial change of the settlement of Xuelingwei village, the following three dimensions can be derived.

1. **The emergence of new perceptual spaces: one of the roles of intangible cultural heritage**

The spatial practise component of Levi's spatial triadic dialectic consists of production and reproduction, in addition to the "specific collection of locations and spatial qualities of each social form." Spatial practise can be viewed as a form of perceptual space, a dimension that reminds us of the reality of space and the visible physical space that is the natural material basis for the existence of social space, assuring its continuity and a degree of cohesiveness(Lefebvre,1991). Physical space is referred to as perceptual space. The intervention of the paper-cutting intangible cultural heritage has modified and reconfigured the spatial practises in the village of Bootling Mei, creating a new space for villager activities.

A rural space's sense of place carries the collective memory of its inhabitants, is infused with public or private emotions, and is irreplaceable. Following the implementation of "non-heritage together with rural revitalization," Xuelingwei Village's distinctive public space has been altered. In addition to the places where villagers live and farm, a variety of public areas, including a paper-cutting museum, a paper-cutting exhibition hall, an oil painting gallery, a square, and a playground, have been built. This expands the sensory experience of the town's spatial environment and develops a new spatial representation of the hamlet.

This dimension refers to material indispensability and adaptability. For Xuelingwei, because of the paper-cutting culture, there is a significant transformation of the iconic public space in the village space. For instance, there is a paper-cutting museum displaying contemporary works by paper-cutting inheritors and artists, as well as an oil painting gallery where villagers and tourists can take art classes and workshops. Then there is the example of a visitor centre, which has a wealth of information about the village's past and present development, as well as numerous paper-cutting souvenirs.
In terms of media studies, Lefebvre's concept of perceptual space draws attention to the more material, sensory (sensual) dimension of the media; the media in the form of instruments and infrastructures that make up our everyday world.

These spaces contribute to the development of a "media space" for paper-cutting culture in the hamlet, shaping the cultural experience and cultural imagination of villagers and foreign tourists. Meanwhile, human mastery of the spatial world is simultaneously mediated by digital technology in the digital era. Under the technological trend of constructing a digital village in China, the village is a complex composite space that is both a media location and a combination of functions. In the village of Zhaolingwei, digital facilities, media activities, museums, and other elements are added to create a "media space" for paper-cutting culture, influencing the cultural experience and cultural imagination of villagers and foreign visitors, and contributing to changing the stereotypical image of the village's function, expanding the boundaries of rural public space, and removing "barriers" and "barriers" in rural society. Changing the preconceptions of village functions, widening the bounds of rural public space, and dismantling rural society's "barriers" and "silent" are significant constructive and creative functions. Villagers create public spaces for implicit cultural exchange by observing and intersecting in such composite settings.

2. The creation of a new conceptual space

Conceptual space can be named representations of space as well, which in Levi's spatial triad refers to a condition in which space is intertwined with knowledge, symbols, codes, and relationships, and the second dimension he specifies is "conceptual space." According to Jasson, the concept of conceptual space is related to the circulation or mediation of multiple spatial representations, highlighting the importance of media in changing our understanding and expectations of the social reality.

This bundle of space and sign is made possible by the increasingly fluid setting between symbolic and material space precisely because of media interventions; the technological convergence that allows for increasingly free sharing or flow between different content or platform spaces; and the interactivity of information that breaks down the boundaries between different content or platform spaces. The replicated space facilitates a more intimate physical engagement between consumers and media. All of these factors accentuate the medium's capacity to shape space. Media's repeated actions shape space and produce the worlds we inhabit. In order to revitalise development in Houguan, it is essential to transcend space in a simply geographical sense and build representations of cultural space with many meanings, such as social and historical, symbol-rich settings. This idea is associated with the circulation or mediation of multiple spatial representations, highlighting the importance of media in altering our understanding and expectations of the social world.

Pre-correction of experience. This idea refers to the second dimension referred to as "conceptual space," which is associated with knowledge, symbols, codes, and relationships.

Paper-cutting is an intangible cultural heritage strengthens villagers' information communication and identification, and contributes to the building of their cultural identity and beliefs.

For example, the intermingling of paper-cutting with the regional Ma Xiangu faith culture (another regional national non-heritage culture), prince ginseng culture and Gaoshan white
The tea culture has produced a number of paper-cutting works with local characteristics, both consolidating the artistic attributes of paper-cutting and further influencing the villagers' construction of their identity with local culture and beliefs.

Jasson's argument is based on the relationship between mediatization and spatial transformation, as it is this binding of space and symbols that has led to an increasingly fluid setting between symbolic and material spaces as a result of the intervention of the media; the convergence of technologies that has led to an increasingly free sharing and flow between different content or platform spaces; and the interactivity of information that has broken down the bountiful boundaries between different content or platform spaces. The replicated space facilitates a more intimate physical engagement between consumers and media. All of these factors accentuate the medium's capacity to shape space. Media's repeated actions shape space and produce the worlds we inhabit. For Houguan, the symbolic notion of space full of symbols is related to the circulation or mediation of various manifestations of space, thereby highlighting the importance of media in shaping our understanding and expectations of the social world in order to transcend the purely geographical sense of space (Soja, 1996).

3. Reclaiming living space

This space is named representational spaces by Lefebvre. As a result of cultural and environmental changes, which ultimately affect on the lived experience level of the space, new social interactions are lived out through the interaction of users and the environment, experiencing their associated imagery and symbols, and new living spaces are generated. Creating new spaces necessitates changes in everyday behaviour, societal conventions, and practises. Socio-spatial existence is not merely a physical object or an empty field; rather, the existence of the field, the interaction between people and nature and people, constructed by the actions of people in their daily lives, is its essence; that is, the production of space refers to the production and reproduction of social relations, the life of people in space. Dismantling compartments to create connections between groups of people.

The norms of social practice. The paper-cutting heritage has become a significant factor in promoting interaction within the villagers, creating a linkage between people and enhancing "communicability."

The paper-cutting heritage has become a significant factor in promoting interaction among the villagers, creating a linkage between people and enhancing "communicability." In the new paper-cutting and oil painting museums, villagers learn to do paper-cutting, exchange paper-cutting, reorganize and get along with each other in a new form, promote interaction among villagers, bring people a renewed sense of spatial awareness, break the inherent way of life, expand the sensory experience, promote embodied interaction in public space, and contribute to the establishment of internal communicability in the village.

Due to the profound influence of paper-cutting culture, the village of Xuelingwei has also established a centre for the transmission of intangible cultural heritage skills and an industry-academia-research base for production, sales, processing, and training, and continues to host paper-cutting training courses, to curate exhibitions of paper-cutting artworks and other exhibitions and cultural tourism events.

In addition, the spatial evolution of intangible cultural heritage reveals a trend and turn toward mediatized mediation. Because from perception to conception and representation, this
context, human activity, and media attention all produce the interplay of three places, and this is mediatization.
Reference


Decomposing the Stereotypes: East-West Dichotomy in the Film Adaptations of W. S. Maugham’s the Painted Veil

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Abstract
William Somerset Maugham’s classical novel The Painted Veil (1925), in which a marital crisis is set against a cholera epidemic in China in the 1920s, and its three Hollywood adaptations (1934, 1957, 2006) feature a confrontation between the East and the West through the interaction between the Westerners, allegedly bringing progressive methods in dealing with the epidemic, and the local population. The ensuing tensions and contradictions are represented depending on the historical and political contexts of film production, predominant ideological trends and evolving attitudes towards ‘the white man’s burden’ myth. As an expansion of previous research (Stanova & Peeters, 2021), the present work explores the visual aspects of power relationships between the representatives of the Occident and the Orient in the adaptations of The Painted Veil. The three film adaptations created in different historical periods reflect the attitudes, stereotypes and beliefs dominating Western society at the time of filming. The analysis of mise-en-scène, blocking and camera angles provides insights into the stereotypical representations of the characters’ positions of power and a gradual restructuring of power dynamics in the most recent film adaptation. I argue that individual confrontations as presented in the film adaptations are expandable to a more general opposition between two different cultures and worldviews.

Keywords: William Somerset Maugham, Film Adaptation, Power Relationships
Introduction

William Somerset Maugham’s classical novel *The Painted Veil* (1925) starts in colonial Hong Kong, where, on discovering his wife’s infidelity, the shy and reserved British bacteriologist Walter Fane decides to accept the post of a doctor in inland China and to bring his wife Kitty to the cholera-stricken town Mei-tan-fu. The novel has been adapted for screen several times in Hollywood, counting two Metro-Goldwyn-Mayer productions, *The Painted Veil* (1934, dir. Richard Boleslawski) and *The Seventh Sin* (1957, dir. Ronald Neame and Vincente Minelli [uncredited]), and the Warner Independent Pictures adaptation *The Painted Veil* (2006, dir. John Curran). The article by Stanova and Peeters (2021) explores the visualization of power relationships in the three film adaptations of the novel. Whereas the focus of the article is on the balance of power in a marital context, the present work shifts the focus to the power relationship between the representatives of the Orient and Occident in the context of British imperialist expansion in Southeast Asia as represented in the adaptations of *The Painted Veil*.

The analysis of the different approaches that the three film adaptations chose to visualize power relationships between their characters helps firstly to compile an overview of cinematic techniques used for highlighting the power that the characters have at particular moments; secondly, it allows to assess the evolution of the contemporary attitudes towards power dynamics in a colonial context in the decades between the adaptations. It is particularly relevant to consider this at the present moment, taking into account postcolonial approaches to both the source text and the first two film adaptations produced during the colonial era. The adaptations show the changing attitudes towards colonialist endeavours and the critical reassessment of the role of the Western interference in local affairs in the East. The film adaptations of *The Painted Veil* display a shift from the representation of the Westerners as bringing progressive methods in dealing with the epidemic to a more critical approach towards ‘the white man’s burden’ myth.

The analysis of the film adaptations of *The Painted Veil*

The novel *The Painted Veil* has been studied, among others, from the points of view of colonialism and Orientalism; its film adaptations, however, have received limited scholarly attention. The film adaptation of a novel offers to the viewer concrete visual clues as opposed to the verbal descriptions and reliance on the reader's imagination in the novel. As suggested earlier (Stanova & Peeters, 2021), certain implicit elements in the literary work can gain strength and emphasis in a film adaptation through the visual elements, while visualization of a scene on screen can provide additional clues facilitating the interpretation of the relationship between the characters. Films being examples of a visual narrative, the scrutiny of power relationships between the characters is based on the detailed analysis of cinematography, mise-en-scène and various cinematic techniques. The present work continues to apply the angle of analysis that was efficiently used earlier (Stanova & Peeters, 2021): blocking (the actors’ positioning and movements in the frame) is considered a primary source of information in clarifying the relationship between the characters and in the analysis of power relations between them. Such aspects as the actors’ physical positions (standing or sitting) and the proximity of the actors to the camera can also serve as indicators of the characters’ position of power.

In films, the visualization of power relations between (groups of) people can offer important insights into the attitudes and beliefs dominating society in a certain period. As Nick Lacey points out, films depicting events taking place during the colonial era can provide valuable
information about the society in which they were made and contemporary attitudes towards colonialism (2005, p. 283). He also argues that the changes in society’s understanding of certain issues can be gleaned through comparing texts/films from different periods, and he makes an important comment that the way a represented group is depicted depends crucially on who is doing the representing (2005, p. 59, p. 270). Being influenced by social pressures and norms, filmmakers tend to attribute to fictional film characters “attitudes, gestures, sentiments, motivations, and appearances that are, in part at least, based on social roles and on general notions about how [a representative of a certain social or ethnic group] is ‘supposed’ to act” (Allen & Gomery, 1985, p. 84, p. 158). It becomes apparent that the historical contexts in which the films were created had a decisive influence on the representation of power relationships in the screen adaptations of The Painted Veil.

Written during the colonial era and depicting colonial Hong Kong and mainland China facing Western interference in its economic, political and social affairs, the novel The Painted Veil suggests a postcolonial reading. In a colonial context, power relations unavoidably come to foreground. Somerset Maugham described life in British colonies based upon his first-hand experience. Similar to his well-known cycle of short stories set in Asia, The Painted Veil provides a rich source of information on the relationship between the West and the East in the first quarter of the 20th century, as seen through Western eyes. In his seminal work Orientalism (orig. publ. in 1978), Edward Said states that the Orient was regarded in the West as “one of its deepest and most recurring images of the Other”, and the relationship between the Occident and the Orient was considered to be that “between a strong and a weak partner” (1995, p. 1, p. 40). In Maugham's novel, the image of the Chinese as the “Other” is distinctive; however, the representation of the relationship between the Westerners and their Eastern counterparts is not prolific in details which would enable the reader to easily visualize the distribution of power.

In what follows, the visual aspect of the interaction between Walter and Colonel Yu, a representative of the Chinese authorities in Mei-tan-fu, will be examined. Interestingly, in the novel Colonel Yu is a recurrent topic of conversation; however, he actually appears only in one scene, at Walter’s deathbed. The Colonel is described as “a masterful man” possessing determination and a strong will, ensuring public order and containing the epidemic to the best of his abilities (Maugham, 2001, p. 76). As a local acquaintance reveals to Kitty, Walter has “got Colonel Yu in his pocket” (Maugham, 2001, p. 92), which does not clearly define the relationship between the two men. The scene of Walter’s death, in which Colonel Yu watches Walter’s last minutes with tears in his eyes (Maugham, 2001, p. 163), creates an impression of a sincere attachment on his part. Thus, the novel treats Walter and Colonel Yu as two strong personalities who contribute considerably to the fight against the epidemic. However, it leaves their personal relationship and the power relationship largely unclear.

Colonel Yu appears in each screen adaptation of The Painted Veil, although the significance of this character evolves from film to film. The 1934 adaptation clearly demonstrates the imperial gaze and the predominance of ethnic stereotypes. Walter’s first encounter with General Yu (Colonel in the novel) clearly defines their future relationship: they exchange greetings as Walter is carried through the town in a sedan chair; thus, throughout their brief encounter (00:50:25-51) Walter looks down on the General (performed by the Swedish-American actor Warner Oland cast in an ethnic role, a common practice in Hollywood in 1930s [Berry, 2000, p. 119]), which emphasizes the former’s position of power and authority. Even though in the next two encounters (00:55:31-00:57:08 and 00:59:32-55) Walter’s domination is demonstrated through his authoritative voice, gesticulation and wording, the
first encounter between these two characters marks the subordination clearly and efficiently through the visual clues. The weaker position of the General is indicated visually in their last encounter, when the camera focuses primarily on Walter and shows General Yu first in the background through the window, then near the door (01:02:23-01:03:00). Walter, through his privileged position in front of the camera, occupies a dominating position, overbearing and overshadowing General Yu, who is made visually smaller through his positioning. He appears to be encroaching on Walter’s space and pleading attention from his more powerful opponent.

Concerning the West-East relationship, *The Seventh Sin* (1957) appears considerably more neutral, which can be explained by the fact that the film was produced in the period of a rapid decline of colonialism. As Said points out, an important change took place during the interbellum when the Orient started to challenge the West which was entering a cultural crisis “partially caused by the diminishment of Western suzerainty over the rest of the world” (Said, 1995, p. 257). In the only significant scene involving Colonel Yu (performed by Kam Tong), as he greets Walter in Mei-tan-fu (00:32:33-00:33:40), he forms one of the summits of a triangle with Walter and the village elder, in a balanced distribution of power and authority. However, as Walter and Carol (Kitty in the novel) step up a gently sloping hill, Colonel Yu cedes the way and follows them. The Westerners thus acquire a dominating attitude when shown standing on a higher ground than their companions; they are also put in the position to lead the group up the hill, which demonstrates that even in an unfamiliar location they assume priority and exhibit their leadership qualities; their taciturn claim to preeminence remains unchallenged.

As McFarlane notes (1996, p. 37, p. 187), the time-lapse between the publication of the novel and the production of the film version influences the way the source text is rendered on screen as well as affective and intellectual responses of the audience to the two products. The most recent adaptation of *The Painted Veil* (2006) reflects important ideological shifts and variations in aesthetic and political climate that took place in the eighty years separating the publication of the novel from the film adaptation. With its careful treatment of East-West relationship, exposure of both Occidental and Oriental views and added scenes of nationalist protests in China, the film becomes a postcolonial adaptation of a literary work created in the colonial period, a “willful reinterpretatio[n] for a different context” (Hutcheon, 2006, p. 153). It is important to note that the filmmakers may be motivated to regard the story from a clearly postcolonial perspective due to purely financial reasons: since the Reagan era the “overtly patriarchal and white supremacist images [...] have become poor box office” (Davies & Smith, 1997, p. 2).

Although the latest adaptation of *The Painted Veil* shows how people belonging to different social systems and world views work together towards a common goal, the intrinsic differences still remain. In the film, Colonel Yu (performed by Anthony Wong) has dignity and self-assurance, rather different from this character’s subservience in the 1934 adaptation; he has a reserved attitude and a latent tension with regard to Walter’s work in Mei-tan-fu. The more equal distribution of power between Walter and Colonel Yu transpires through the visual clues. Neither man appears to dominate the other at the beginning of Walter’s stay in Mei-tan-fu as they are mostly shown standing next to each other or with the Colonel quietly and intently observing Walter from a distance. In the scene (01:09:58-01:11:00) of an open confrontation between these two men, Walter and his assistant are seated in the laboratory whereas Colonel Yu is standing, which necessitates Walter’s looking up while addressing the latter. The three characters form a triangle, with Colonel Yu being the summit, personifying
the power vested in him in handling local affairs. As Walter’s resentment at the way the Colonel manages the situation rises, he abruptly stands up and is shown as dominating his interlocutor with his height and posture while “respectfully request[ing]” (01:10:48-56) more determined actions from the latter. The abrupt change of position challenges their power balance. In the scene of the altercation with the local population concerning the displacement of the cemetery (01:11:45-01:12:12), Colonel Yu is shown standing higher on the uneven ground of the Chinese cemetery than Walter, alluding to his greater power at decision-making in this situation. Quite remarkably, two horse-riding scenes involving the two characters have similar mise-en-scène, showing Walter closer to the camera, with the Colonel more in the background (01:15:00-03 and 01:43:06-11). Thus, although positioned side by side, the way the characters are presented invites the spectator to see the scene and consequently the relationship between the two men from Walter’s perspective. However, in the most significant dialogue between these two characters (01:15:05-01:16:17), in which they discuss the relationship between Britain and China, they are shown sitting next to each other in a perfectly balanced manner. They are representatives of two opponent nations and different cultures, struggling between their personal feelings and motivations and the pressure of tumultuous historical background, unable to extricate themselves from the policies and power struggle of their countries. It can be argued that personal confrontations as presented in the film adaptations are expandable to a more general opposition between two different cultures and worldviews.

Conclusion

The analysis has demonstrated how the visualization of power relationships between a Western doctor and an Asian military chief in the film adaptations of *The Painted Veil* initially asserted the dichotomy between the Occident and the Orient. It has been laid out how the spatial relation of the characters indicated the power they possessed at certain moments. Moreover, it has been shown how the representation of the relationships between the Occidentals and Orientals in the film adaptations of *The Painted Veil* evolved, moving from a highly stereotypical image of Eastern subjugation to Western dominance in the 1934 screen version, with fixed positions of power for the characters involved, to a more neutral relationship with indications of mutual respect in the 1957 version, to fluctuating positions of power in the 2006 film. The latest screen adaptation conferred on Colonel Yu the power and strength that he was denied in the previous versions. It can be concluded that the film adaptations of *The Painted Veil* reflect the leading discourses of their times and represent the characters following the contemporary attitudes towards racial (in-)equality.
References


