

Lewis Parry

2206670

Product and Furniture Design

ADAD5004 Research in Practice

Word Count:

Julia Lockheart

Culture, Ergonomics, Aesthetics.

How is product design influenced and created through an understanding of culture and aesthetic design?

Independent Inquiry Proposal: Culture, Ergonomics and Aesthetics

Through this research document, I will investigate the meaning of the words Culture, ergonomics and aesthetics in the context of furniture and product design. I have always found it interesting 'what inspires people and drives them to create something that's deemed new?' As we see the world it is the things we see that can change our designs. I have picked these three words as I think they are important factors to making a well-rounded designer. It is my intention to use what I have learned and combine these three words, to form the question for my independent inquiry.

Culture

The Cambridge Dictionary states that culture "defines the way of life, especially the general customs and beliefs, of a particular group of people at a particular time" (Cambridge Dictionary, 2023). However, this is arguably one definition of a multi-faceted word. Ben Highmore explains that the word culture has a multitude of meanings that relate to it "words that are very close to it ('society', 'the arts', and so on)" (Highmore, 2015). Highmore is arguing that culture is something we relate to and interact with from day to day, in a particular population and country.

In a design-related job role, a designer can create their own culture through the influences of other older and existing cultures. A designer can research a culture by traveling and taking inspiration from where they live. Adam Galinsky has researched the benefits of living abroad and away from one's own culture stating that "the more countries people had lived in, the more creative their work tended to be" (Shaw, 2016). Professor Galinsky also stated that a brief visit was not enough to get a boost

in creativity but the ultimate key to getting that creative boost from visiting a new place was to “engage and interact with people”(Shaw, 2016). This means that culture is not just about the place, architecture, and food. Culture is mainly about the people. This means that people from different places create the culture.

In a designer's practice ultimately it is the people or the customer that they are designing for. A designer needs to understand the culture of a place by understanding the people. The benefits of understanding other people's cultures cannot be understated however, a designer will have their own culture they will bring into their work. “Our own cultural values play a primary role in influencing the design” (Razzaghi and Ramirez, 2005). This means things that have been seen and experienced along with the interactions with people have formed the way culture is formed and understood. This is a mix of environment and education resulting in “designers incorporat[ing] their own conscious, subconscious and unconscious minds” (Razzaghi and Ramirez, 2005), into their work. Designers will design a product of their environment without knowing.

For example, in Western culture a chair is designed to be used at desks, bars and tables, situated off the ground and with long legs to make sitting at a Western table comfortable (see figure 1). However, within Eastern culture specifically Japanese, they sit on the floor, so although there is a need for a chair, this has no legs (see figure 2). Fundamentally, they both serve the same purpose however due to the culture they are designed differently to fit within their cultural needs. In Figure 2 you can see the influences that the West has had on Japan. As designers travel, they

bring back new ideas and new techniques from different cultures and assimilate them as their own. Although Japanese culture has always had a chair that fitted the requirements, the current style, represented in figure 2 has the hallmarks of Western influence.



Fig. 1: *Western style chair*



Fig. 2: *Japanese style chair*



Fig. 3: *Bethan Gray's - Nizwa Cabinet*

A culturally inspired piece of product design is the Nizwa cabinet (see Figure 3) by Bethan Gray, who originates from a Scottish father and a Welsh mother. Her family descends from the nomadic Rajasthani clan, predominant in Persia and Arabia. Gray's heritage and culture are clear to see within this cabinet, from the domed shapes representing Arabic forts to the colour representative of the landscape found on the Arabian Peninsula.

The Nizwa cabinet (see Figure 3) is culturally Arabic. It's named after the city of Nizwa in Oman which is where the Rajasthani clan roamed. The cabinet utilises traditional Islamic shapes as decoration but with simplistic design notes therefore keeping a modern consumer in mind. This combined with the contemporary shapes and colours makes something that is from the Middle East fit inside a modern Western home. By incorporating cultural design aspects into contemporary furniture enables a bio-directional influence allowing culture to travel from place to place.

Gray has found influence from within her family culture to create the Nizwa cabinet. This is in keeping with the stories that she tells of her grandmother who was Persian. The interaction with stories, trips, and people from the Arabian peninsula has culminated in products and a brand identity that has formed her style as a designer.

Ergonomics

The Cambridge Dictionary states that ergonomics is "relating to the design of furniture or equipment which makes it comfortable and effective for people who use it" (Cambridge Dictionary, 2023). Ergonomics are fundamentally important to product and furniture design and are the building blocks of every single product. Knowingly

or unknowingly everything has been designed in a way to be interacted with by humans. From clothes, cars and buildings down to pencils and pens. Ergonomics has played a big part in humanity's evolution and the evolution of product design. Within contemporary society countless studies have taken place recording data indicating what is comfortable within product design. Manufacturers now have the ability to create furniture with these ergonomic markers in mind.

With ergonomics, it is important to note the word anthropometrics which is "taking measurements of the human body" (BBC, 2024). The body has a big impact on the ergonomic design created, ensuring that the product supports the body effectively. Anthropometrics breaks down the population into percentiles. 95th percentile means 95% of people have this measurement in an age category and in a gender category. Therefore, anthropometrics has a huge impact on what the designers can design. Once a designer has decided whom their product is for, they can find the data for the target user. This will inform the correct ergonomics for that product and intended design market; "Size, weight, shape, position of buttons and controls" (BBC, 2024). Through utilising this data products can be created specifically with the user in mind.

Just having the ergonomic data is not stand-alone by itself. According to the United Kingdom's Design Council, ergonomics and theory are half the steps to a human-centered design. "Prototyping is one of the most important parts of creating a human-centered product because it allows you to test your design on actual human beings" (Design Council, 2024). A designer needs to test the product for its ergonomics to check that they have interpreted the anthropometric data correctly.

This in turn makes sure that they have an ergonomically designed product for their target consumer.

A good example of a company designing for the 95th percentile is IKEA. As IKEA is a global brand they have a massive range of customers. They are designed for kids and adults alike; they will use existing ergonomic data as well as testing their products with the target user. However, there are going to be people that will be outside the 95th percentile. This 5th percentile of consumers cannot buy from IKEA because it is not ergonomically accessible for them.

For this 5th percentile, IKEA started a design program called *IKEA ThisAbles* (see figure 4). The idea of IKEA's *ThisAbles* program is to "create a better everyday life for as many people as possible" (Aouf, 2019). This is achieved through creating additional components enabling people with disabilities to use their products more comfortably. By 3D printing small quick add-ons, IKEA can design for the 5th percentile of the population making IKEA's products more ergonomically accessible to more people.



Fig. 4: - IKEA ThisAbles campaign poster



Fig. 5: - IKEA ThisAbles display in The IKEA Museum

Figure 4 and Figure 5 display the range of ThisAbles downloadable products to assist in the day-to-day usage of IKEA's ranges. A designer will have looked at the data and analysed lots of different factors. For example, figure 5 shows a mono block tap. This tap has a lever handle that someone with low dexterity in the hands would normally struggle to use. A designer has seen a problem with the current ergonomics for the 5th percentile. This is fixed through adding a bigger handle and lowering it. This then allows other parts of the body like the arm, wrist, and hand to be used to work the tap. Without a designer's research and knowledge of ergonomics, it would not be possible to make something accessible to the 95th percentile let alone the 5th percentile.

The word ergonomics is the research of how people interact with products. It is the designer's job to take into consideration the largest percentile when designing for a mass market however to make design all-encompassing for a wider demographic, individual needs must be considered and adapted for. IKEA's understanding of ergonomics is a highly specialised skill that involves hands-on research, testing, and observational skills making them able to design ergonomically for everybody.

Aesthetics

The Cambridge Dictionary states that aesthetics is "the formal study of the principles of art and beauty" (Cambridge Dictionary 2023). In product and furniture design practice, aesthetics is how a product looks overall. Taking into consideration size proportion and textures, all of these aspects are important to the overall aesthetics of a product or a piece of furniture. In Jane Forsey's, book *The Aesthetics of Design*,

she states that aesthetics is “often with notions of beauty and sublimity in art and nature” (Forsey, 2013). A key word in this quote is nature as it can be the first source for aesthetic inspiration. Fig. 7: LÖVBACKEN side table.

Forsey introduces the theory of “aesthetic judgement”, describing it as “separate moral, social, or political judgments we make about design” (Forsey, 2013). Entirely subjective, these judgements are made as a result of a person’s lifestyle, beliefs and



Fig. 6: Set armchair & footrest lounge chair & ottoman



Fig. 7: LÖVBACKEN side table.

culture. All of these factors dictate the way people look and judge the aesthetics of products and design. This formation of aesthetic judgement, is used by companies to make certain products, that will fit a particular demographic of a population. An important part of market research is finding out why certain people like certain things.

There are many different breakdowns and categories of the word aesthetic as it is a personal preference. It is usually paired with another word that will categorise the type of aesthetic. For example, a mid-century aesthetic refers to the common features that build up mid-century modern products; neutral colours, simple material and simple shapes. Charles and Ray Eames were some of the designers that defined mid-century modern aesthetics.

Figure 6 shows the set armchair & footrest designed by Charles and Ray Eames. This chair and footrest represents quintessential mid-century modern design with its simple lines, natural colours and modern manufacturing techniques. In Figure 6 we see the chair in the context of a home. The home is somewhat modern but still has a mid-century modern aesthetic feel to it. The mid-century modern aesthetic is still used to this day and has been making a comeback in recent years with IKEA bringing back designs from this time period like the LÖVBACKEN side table (see figure 7) which was originally a 1950s design when this design movement was first happening. This demonstrates how the aesthetics of design can evolve but also repeat themselves many years later.

A designer and architect that embodies the ethos of natural aesthetics is Antoni Gaudí. Throughout Gaudí's work, nature was a massive inspiration underlying most of his design work; "Nothing is invented for it is written in nature first" (Heathcote, 2024). This connection with nature is what makes Gaudí's work aesthetically pleasing. His ability to observe nature and copy its forms make him a master of natural aesthetics. By mastering the use of high detail and simple shapes that appear in nature, he was able to make iconic pieces of work that are still celebrated to this day.

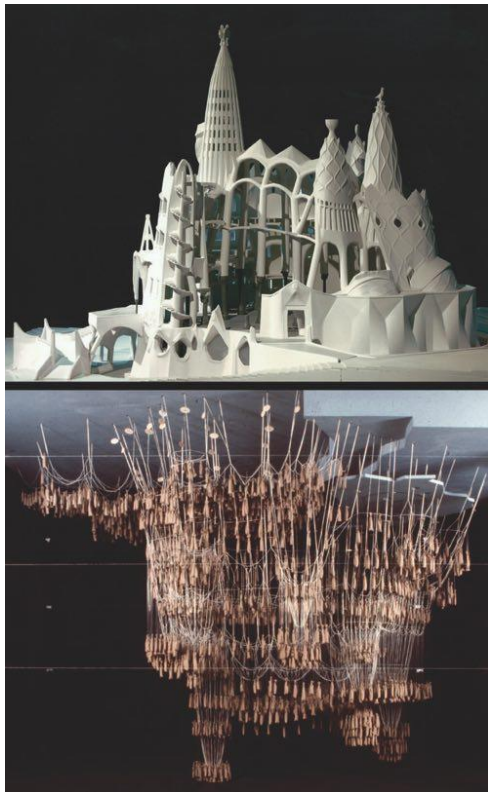


Fig. 8: Model of La Sagrada Família

Gaudí's most famous and penultimate piece of work was *The Sagrada Família* (see figure 8). This building is aesthetically designed by nature. "Gaudí worked with models made of ropes and weights of lead" (Larrotcha ,2019). By looking and observing the shape that the weights and the ropes formed with the help of gravity, Gaudí would then sketch the silhouette down. This would then go on to determine the overall aesthetics of *The Sagrada Família*.

Inside *The Sagrada Família* the inspiration of nature continues and is clear to see. The natural arches and pillars that support the roof, are designed to look like trees. Carved out of stone they have a smooth and hard texture but with an overall soft

aesthetic. This balance is key when designing aesthetically pleasing products and buildings. By utilising the aesthetic of nature Gaudí has become successful past his life, with *The Sagrada Familia* welcoming 3.7 million people in 2022 (Lopez, 2024). That is the power of well-designed aesthetics

In summary, the three words I have looked at culture, ergonomics and aesthetics all play a key role in product and furniture design. In culture the importance of understanding a place is to understand the people, their beliefs and values making the design more specific for the location and the person. The more cultures a designer has lived within the more creative their designs can become. Within ergonomics a designer needs to understand who they are designing for as this can alter the overall look and purpose of the product and affect how people interact with them. Ergonomic design can be specific to the individual, catering for their specific needs and this is essential for the designer to understand. Aesthetics brings together culture and ergonomics, creating a product design that is individual to a person's need whilst still fitting their aesthetic judgment.

Through my research I have found a variety of information that has led me to my independent Inquiry question, how is product design influenced and created through an understanding of culture and aesthetic design?

Bibliography

Aouf, R.S. (2019) 'IKEA's ThisAbles add-ons adjust furniture for people with disabilities', *dezeen*,. Available at: [IKEA's ThisAbles add-ons adjust furniture for people with disabilities \(dezeen.com\)](https://www.dezeen.com/2019/03/14/ikea-thisables-add-ons-adjust-furniture-for-people-with-disabilities/) (Accessed: 10 March 2024).

BBC Bite Size (2024) *Ergonomics and anthropometrics*. Available at: [Ergonomics and anthropometrics - Considering usability when designing - OCR - GCSE Design and Technology Revision - OCR - BBC Bitesize](https://www.bbc.com/bitesize/guides/z9p9t/revision/1/ergonomics-and-anthropometrics-considering-usability-when-designing-ocr-gcse-design-and-technology-revision-ocr-bbc-bitesize) (Accessed: 10 March 2024).

Cambridge Dictionary (2023) *Culture*. Available at: <https://dictionary.cambridge.org/dictionary/english/culture> (Accessed: 10 March 2024).

Cambridge Dictionary (2023) *Ergonomic*. Available at: [ERGONOMIC | definition in the Cambridge English Dictionary](https://dictionary.cambridge.org/dictionary/english/ergonomic) (Accessed: 10 March 2024).

Cambridge Dictionary (2023) *Aesthetics*. Available at: [AESTHETICS | English meaning - Cambridge Dictionary](https://dictionary.cambridge.org/dictionary/english/aesthetics) (Accessed: 10 March 2024).

Design Council (2024) *Seven tenets of human-centred design*. Available at: [Seven tenets of human-centred design - Design Council](https://www.designcouncil.org.uk/tenets-of-human-centred-design) (Accessed: 10 March 2024).

Forsey, J. (2013) *The Aesthetics of Design*. Oxford: Oxford University Press.

Gray, B. (2024) *Bethan Gray*. Available at: [Luxury Furniture & Homeware. Shop the Collection at Bethan Gray Design](#) (Accessed: 10 March 2024).

Heathcote, E. (2024) *House museums #52: Casa Vicens, by Antoni Gaudí*, Financial Times, 27 January. Available at: [House museums #52: Casa Vicens, by Antoni Gaudí \(ft.com\)](#) (Accessed: 10 March 2024)

Highmore, B. (2015) *Culture*. London: Routledge.

IKEA (2024) *LÖVBACKEN Side table*. Available at: [LÖVBACKEN medium brown, Side table, 77x39 cm - IKEA](#) (Accessed: 10 March 2024).

Larrotcha, S. (2019) *History of stone applied to architecture: technology and evolution*. Available at: [History of stone applied to architecture | Stonesize \(stonesizepanels.com\)](#) (Accessed: 10 March 2024).

López, A. (2024) *Number of visitors to the Basílica de la Sagrada Família in Barcelona, Spain from 1994 to 2022*. Available at: [Number of visitors to La Sagrada Família, Barcelona | Statista](#) (Accessed: 10 March 2024).

Razzaghi, M. and Ramirez, M. (2005) 'The influence of the designers' own culture on the design aspects of products', *EAD06 International Conference of the European Academy of Design, Bremen, Germany*. University New South Wales (UNSW) and online, 2005. Available at: <https://doi.org/10.26190/unsworks/454>.

Shaw, K. (2016) *Travel broadens the mind, but can it alter the brain?* Available at: [Travel broadens the mind, but can it alter the brain? | Students | The Guardian](#) (Accessed: 10 March 2024).

List of Illustrations

Figure 1: Lancaster Ltd. (2024) *Western Style Chair* [photo]. Available at: [AMAZON FULFILLED PRODUCT - PRICE IS FOR TWO CHAIRS - SOLD IN PAIRS. Beautiful, strong Cafe, Bistro, Dining Restaurant, Pub chairs. LANCASTER CHAIRS DESIGNED TO OUR OWN SPECIFICATIONS - ONLY NETWORLD FURNITURE HAVE THIS PRODUCT : Amazon.co.uk: Home & Kitchen](#) (Accessed: 10 March 2024).

Figure 2: Just home Ideas (2022) *Japanese style chair* [photo]. Available at: [20+ Simple Japanese Muji Floor Chair Design Ideas | Floor chair, Chair design, Muji furniture \(pinterest.co.uk\)](#) (Accessed: 10 March 2024).

Figure 3: Bethan Gray (2024) *Nizwa Cabinet* [photo]. Available at: [Nizwa Family | Bethan Gray Design](#) (Accessed: 10 March 2024).

Figure 4: IKEA (2024) *IKEA ThisAbles campaign poster* [online graphic]. Available at: [IKEA's ThisAbles Project improves the accessibility of their designs with simple add-on solutions - O'Herlihy Access Consultancy](#) (Accessed: 10 March 2024).

Figure 5: Lewis Parry (2024) *IKEA ThisAbles display in The IKEA Museum* (personal collection, 2024).

Figure 6: Charles & Ray Eames (1956) *Set armchair & footrest lounge chair & ottoman leather / eames*. [photo]. Available at: [Vitra Lounge Chair & Ottoman Set armchair & footrest - black polished aluminium cherrywood | Made In Design UK](#) (Accessed: 10 March 2024).

Figure 7: Ikea (2024) *Lovbacken side table* [photo]. Available at: [LÖVBACKEN side table, light green, 77x39 cm - IKEA](#) (Accessed: 2 May 2024).

Figure 8: Antoni Gaudí (2019) *Model of La Sagrada Família* [photo]. Available at: [History of stone applied to architecture | Stonesize \(stonesizepanels.com\)](#) (Accessed: 10 March 2024).