

Product – Interior Compatibility in Nordic Design: A Case Study of B&O in Hong Kong Market

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Abstract

This article studies how Nordic design values the product's compatibility with home interiors. Product designs value both form and function to fulfill users' wants and needs respectively. Products were designed following the brands' design philosophy, distinguishing brands in the same target market from each other. Product brands were focused on creating product uniqueness by different means, e.g., form, color, material, etc. This paper suggested another design focus which was product and interior congruence. Products and the interior should be considered as symbiotic instead of as separate units. One of the functions of interior design was to create an atmosphere. Any products with an exterior design unfit for the environment would damage the harmony of the interior space. Nordic design values the relations between products and the environment. Therefore, a case study is conducted based on a Danish brand, B&O. Data was generated through an interview and a survey to investigate how the brand generates emotion through product and interior congruence. A brand extension design was also part of the case study to show the implication of Nordic design philosophy. The result showed that the user's lifestyle should be considered as a design criterion. It could be used as a reference for brands to develop products in different targeted regions.

Keywords: *Nordic design, product design, home, interior congruence, aesthetic, Hong Kong*

1 Introduction

1.1 Nordic Design

The Nordic countries are a cultural and geographical region in Northern Europe, sharing a similar lifestyle, social system, culture, and history. In addition to the five sovereign regions which are Denmark, Finland, Iceland, Norway, and Sweden, Norden also includes Greenland, Faroe Islands and Aland Island. Due to the marginal location, they form a unique emotion. The stiffness, keenness and lucidity characteristic of the Nordic landscape cultivate an internal style of design. Nature contributes to inspiring Nordic design in both realms of form seen in

Scandinavian art (Stougaard-Nielsen, 2020). Influenced by Bauhaus, Nordic design demonstrates resemblance in its design philosophy. In order to develop a new aesthetic during the Bauhaus movement that would emphasize function over aesthetics, scientific manners are utilized to experiment the association between primitive color and geometrical forms (Galison, 1990). Geometric forms suggest a better use of space compared to curvilinear shapes. This principle is practiced in the design of Haus am Horn by Georg Muehe. The house is featured by a square living room in the center, surrounded by other rectangular rooms. Furniture inside the living room is designed with the same principle in which there is a strong coherence between object and space. Product – interior compatibility in Bauhaus follows an underlying rationale of functionalism. Since Haus am Horn is dominated by squares and rectangles, angles can be fit into angles spatially to achieve an effective use of space.

Nordic style of design aligns with the principle of modernism, clear and functional. Scandinavians worship the essence of nature, rather than emphasizing industrialization. Extravagant ornaments and vivid colors are excluded to maintain visual equilibrium as well as *hygge*. According to Gíslason & Eddy (2017), “the Scandinavian spirit overflows with *hygge*” (p.5). The famous Nordic design brand Ikea utilizes neutral colors and natural materials such as birch, earth stones, and jute to create *Hygge*. *Hygge* is a Danish word for a feeling of coziness and pure conviviality. Scandinavians believe happiness can be achieved by simple activities. This philosophy is converted to Nordic design thinking and explains their embrace of simplicity. Nordic design has to be viewed in the context of an all-encompassing lifestyle trend where the items are used as accessories and accents for a good life, a lifestyle that incorporates smart details, cultural values, and environmental concerns (Sandbye, 2016). Nordic design demonstrates a different product – interior compatibility with a humanized functionalism that integrates sentiment consideration. Li (2018) points out that Scandinavian furniture design is considered as a part of the space affecting the user's sensation rather than a mere product. By way of conclusion, Nordic design does not require a definite differentiation of object between product and interior, instead a homogeneity is suggested.

1.2 Product design and home interior congruence

Product design is about problem-solving and keeping the solution abreast of the times (Eger et al., 2013). The purpose of product design is to provide “a portal to an experience” which reveals that product design is a customer-centered commercial activity (Luchs & Swan, 2011). Product design is about form and function as well as the design process (Morris, 2016). Both form and function of the product aims to optimize the user experience. The function of the design focuses on the consumer’s needs while the form focuses on the consumer’s wants. The function of the product maps out a particular user marker and brands sharing the same customer market utilize the form to differentiate themselves from the others. In the 21st century, aesthetics is having a high priority in choice rather than functions and price (Ashby & Johnson, 2014). Since most communications via the Internet take place through limited effective bandwidths, the ability of the different ways of representing the product to transmit all of its semantic and aesthetic messages becomes of particular importance (Artacho-Ramírez et al., 2008). Aesthetics are about intuitive feeling, taste, and personal preferences. The form of the product suggests the relation between the user’s lifestyle and emotional expression. With aesthetics, it directs consumers’ activity and their choice of purchase.

Having an akin expression as product design, interior design and interior décor transform a house into something that represents the owner’s self-expression (Erasmus et al., 2015; Berry, 2018). In this study, the home interior is discussed. The concept of home refers to the emotional and substantial bond that people have with their familiar environment (Ioannidou, 2020).

Design is a vehicle carrying emotions. Aligning the design language of the product with the interior can maintain harmony. Besides the fundamental functional purpose, adding decorative function to a product can enhance the relationship between the product and the environment. A more united form of emotional expression can thereby be generated. Despite well-designed products, a product may still provoke negative emotions when it is poorly suited to the environment (Naderi et al., 2020). Therefore, a product's compatibility with the environment becomes a vital design consideration nowadays.

Therefore, this study focuses on how product – interior compatibility is achieved in Nordic design, and thus delivering one's lifestyle. Although a number of research studies have been done investigating the aesthetic of Nordic design i.e., furniture (Li, 2018; Feng et al., 2019; Halland, 2021), the concept behind that bridges product design with interior design can be further explored. Realistic case study is conducted by designing a brand extension product for B&O which is a Danish audio brand. Surveys and interviews are done to analyze how form and space interact with human emotion. The objective of this study is to extend the scope of interaction between product and interior space which optimize user experience.

2 Methodology

2.1 Hypothesis

A hypothesis is made which claims that B&O can fit Hong Kong's market and taste. The research concerning Scandinavian design was focused on the chosen brand for this project: Bang and Olufsen (B&O). Aiming to explore the user market in order to gain a deeper understanding of the brand. The project's primary research was based on both quantitative and qualitative research; a survey to conduct a wide demographic of people, as well as additional interviews with Bang and Olufsen retail members and a loyal Bang and Olufsen user. By using these mediums, the goal was to dissect the brand image from a range of perspectives.

2.2 Methodology and results from survey

The survey was targeted at a diverse group of people that came together to form the Hong Kong general public. In order to utilize the data collected, the survey was designed to categorize the public into specific demographics for better differentiating between a Bang and Olufsen user and a non-user. The inception of the survey questions the respondent's experience in purchasing an audio system. The object of this section was to understand the attributes that the consumers value most when purchasing a speaker. The second section was about brand identity research of B&O. The survey gathered information about product semantics and people's willingness to buy. The third section was separated into two parts for B&O users and non-users to investigate their lifestyle, purchase preference and expectation for new products. The final section was designed to explore the public understanding about the brand and its demographic and market competitors. These questions were created in the following styles; multiple choice, checkbox selection, scale of different values as well as a few open ended questions to supplement earlier answers.

All of the data from the general survey was conducted over a period of 2 weeks from 61 individuals. The overall gender of this survey was evenly spread between 49.2% male, 49.2% female and 1.6% preferred not to say. With 47.5% of people being between the age of 18-24. 45.9% of other people were between the ages of 25 - 64. In which about half of them were students and the other half were office workers. In order to make fair judgments on opinions

from the survey, it is crucial to acknowledge the overwhelming number of people who fall in a similar demographic.

In the following, key findings will be analyzed. In section one, respondents were required to rank the importance of attributes during the purchase of an audio system. The option 'Very important' was equivalent to 5 points and descended to 1 point representing 'very unimportant'. The result showed that sound quality was mostly valued by the respondents, with 17 people rating it as 'very important' and a total point of 136. The respondents ranked price as their second valued attributes. The respondents were also asked to use 1-3 words to describe their lifestyle. Referring to Figure 2, most respondents use 'simple' to describe your lifestyle and followed by the words 'chill' and 'free'. It shows that most Hong Kong people is having a positive lifestyle.

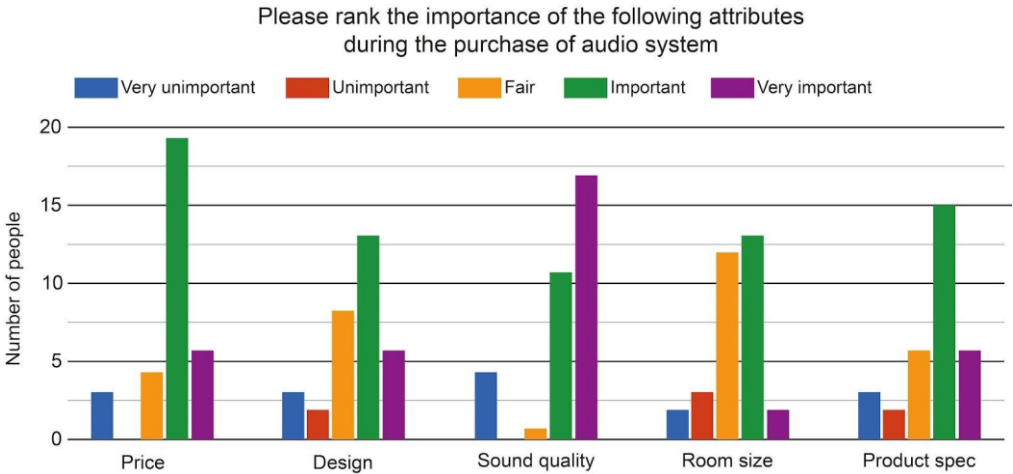


Figure 1. Bar charts showing the importance when purchasing audio system

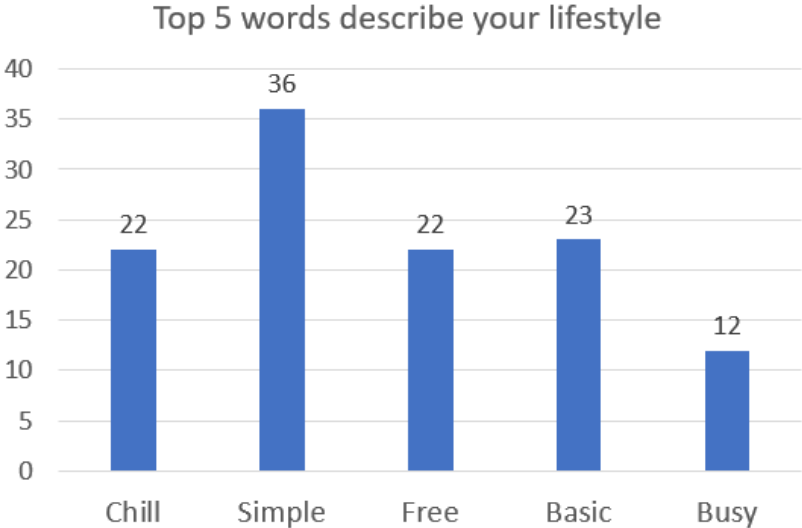


Figure 2. Bar charts showing the top 5 words describes your lifestyle

Will you consider the relationship between the design of the audio and your interior design?

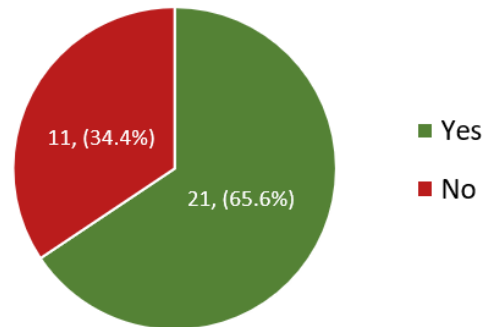


Figure 3. Charts showing people’s willingness in considering the relationship between the design of the audio and their interior design

What feeling do you get from viewing these products?

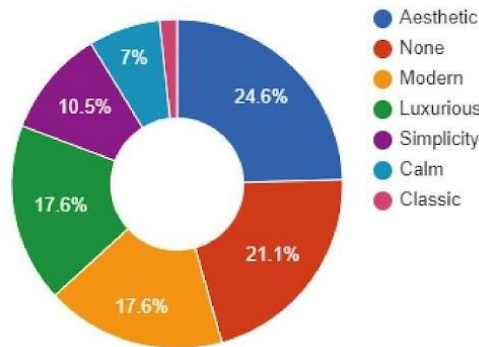


Figure 4. Charts showing other questions

In Figure 3, the majority replied that they will consider the relationship between the design of the audio and the interior which has 65.6% of endorsement. It showed that consumers valued the product-interior compatibility and considered matching the style to achieve visual unity. In section 2, the survey required the respondents to indicate their feelings after viewing products from B&O. In Figure 4, the top 3 answers were ‘Aesthetic’ (24.6%), ‘None’ (21.1%), ‘Modern’ (17.6%) and ‘Luxurious’ (17.6%). The photos of BEOSOUND 1, BEOLAB 18, BEOSOUND SHAPE and BEOPLAY EQ were given as examples. BEOSOUND 1 had a trapezoid silhouette. The speaker has a wide bottom that achieves a compositional balance which creates a sense of credibility. Together with the glossy finish of aluminum, it generates a feeling of expansiveness and deluxeness. B&O applied minimalism in design, in which ornaments are excluded, leaving a clean silhouette. Aluminum was the dominating material in all sorts of products which is an industrial material. Along with the minimal design it created a sense of ‘Modern’. However, the color scheme mainly focused on adopting black, gray and white in the design with a subdominant earth tone color that originated from the natural material. The dominating monochromatic color evoked neutrality, sophistication, and innocence that might reduce the emotional transition between product and user which explained the result of respondents answering ‘None’.

Would you consider buying B&O product again/ in the future?

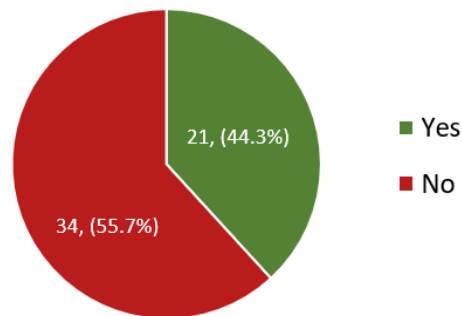


Figure 5. Charts showing questions related to willingness to purchase

In section 3, more than half (55.7%) of the respondents from Figure 5 revealed that they would not consider buying any B&O products again or in the future. They were asked to provide a reason. The top 3 answers revealed that they thought B&O was too expensive to buy, other brands had better sound performance and the product size occupied too much space. However, those who were willing to purchase B&O products explained that they appreciate the design and the aesthetic. It demonstrated that the deterrent factors were referred to the price and tech spec instead of the form factor and the design.

2.3 Methodology and results of staff interview

An interview was conducted with staff members from the Bang and Olufsen Causeway Bay storefront to attain an understanding on how Bang and Olufsen aims to present the company brand image to current and potential users. The main focus from this interview was to explore their target environment, target customers, and brand philosophy. This interview collects qualitative data during an open discussion to allow the staff to elaborate on any further points they deem appropriate. From this interview, the most important findings concerned the aims of B&O. According to the interviewee, B&O's aim is to sell a lifestyle through their audio products which embody beauty and innovative technology. Their target is to create a system for home environments which are highly functional yet feel seamless with the design of the home. Although B&O's products are comparatively expensive to other competitors, the manager justified the price by their attention to detail "You pay a high price for high quality products". It seems B&O views itself as more than an audio brand. Rather the language and brand philosophy expressed to customers seems to reflect similar ideals as a furniture designer.

2.4 Methodology and results of loyal user interview

Prior to conducting the survey and interviews, additional data was collected from secondary resources online and B&O's self-published magazine. Inferring from their Beoworld magazine published in 2007, the marketing intelligence at that time: Jan Dalskov explains "we are a meaningful alternative for those who have made a conscious decision as to what they want in their lives or who are interested in being inspired", he further goes on to claim that the users are not specific to one demographic "we can't label them based on their age, their clothes or their jobs". Instead of designing for mass production, B&O highly valued the needs of individual customers. They aim to achieve a tailored user experience for the customers. As a lifestyle product, it should be able to achieve a reflective design which is representative of the user's taste.

The interview conducted for a loyal Bang and Olufsen user was based on pre-planned questions to better understand the user’s lifestyle and interaction with B&O. The following lists the questions and answers most relevant to this research paper (Table 1).

How did you find out about the brand?	Wanted to buy a wireless headphone Did research online Disliked the shape and appearance of AirPods Superior feeling (attractive appearance of B&O products)
What might keep people from buying from B&O?	Price as a deterrent + sound quality not up to standard for the price paid
Where do you think B&O stands when compared with other brands?	Superior, they don’t have any close competitors
What was(is) your first impression of B&O?	Luxurious, great designs

Table 1. Relevant questions of the interview

From the survey and interviews conducted, the data makes an overarching statement on the relationship between design and Bang and Olufsen. The interviewee has been using B&O products for 4 years. She described she has a ‘superior feeling’ when using the B&O headphones which demonstrates B&O achieves a behavioral design. Since B&O has a great design, consuming B&O products can show that she has a good taste. The survey’s quantitative data demonstrates a focus on a simplistic but aesthetic lifestyle. In order to comply with the brand’s vision aforementioned in the staff interview, future products should be designed accordingly to create a sense of integration with the home environment.

From these comments the implied hypothesis for the following primary research is that the popularity of B&O will not be constrained to a specific kind of user. Instead the outcome of the survey should demonstrate brand interest that is dictated through the user's own tastes and lifestyle delivered by the product and home interior congruence.

3 Conceptualization

3.1 Concept and inspiration

With the help of the user research above, the scope for designing a Bang and Olufsen product was narrowed down to a home-centered form and function. A moodboard (Figure 6) on luxury home interiors was used as inspiration to capture the homely feeling and identify forms suitable for the target environment. In general, the mood board reflects a feeling of calm and stillness. Majority of these interiors use light coloured wood as their dominant element. The interiors show a dual tone high contrast mainly using a pastel color palette. Besides, the research above shows the key concepts: Simplicity and aesthetics. To achieve this, geometric form is a good medium to express the key elements. Thus, cylindrical and conical shapes are included in the concept sketches (Figure 7).

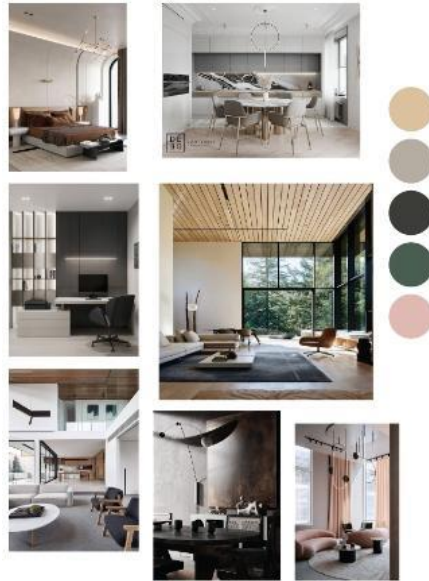


Figure 6. Mood board

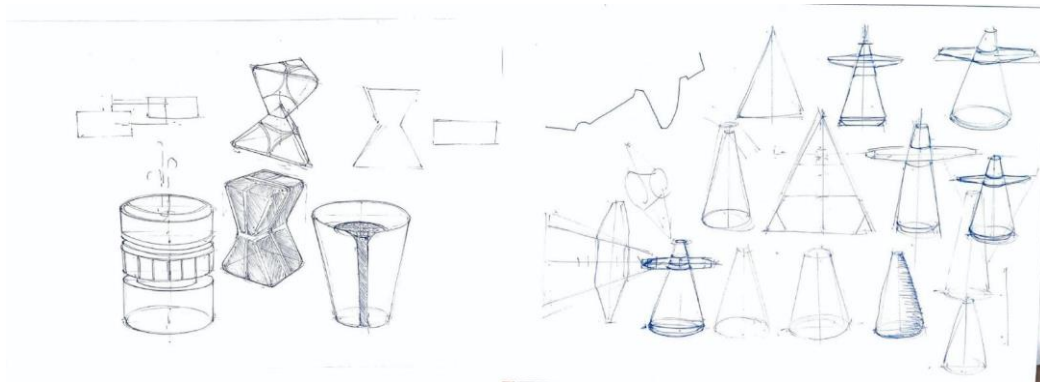


Figure 7. Concept sketches

3.2 Finalized Design

The final design is an air purifier. The overall shape (Figure 8) is based on a triangle. It is divided by the two bevels into three parts according to the technique “rule of thirds”. This method is useful for achieving balance and dynamism while maintaining simplicity. The middle part can be rotated and raised. The aluminum part is the site where the air comes out. It is inspired by the jet engine. The lower part has an ambient light that aims to enhance calmness and comfort. In addition to the basic shape, the black glossy texture symbolizes simplicity and superiority in Nordic design (Figure 8). Besides black, other colors can be selected to better fit the home environment (Figure 9). These features echo with other furniture within the same environment so that the Nordic lifestyle can be created.



Figure 8. Air purifier in a virtual environment



Figure 9. Air purifier in different colors



Figure 10. Air purifier prototype in an environment

3.3 Hong Kong users' profile

The design can fit Hong Kong's users. According to Figure 2, a majority of the respondents believe their lifestyle is simple and free. The silhouette of our design is clean and direct without any visual dictating elements.. More importantly, some people would like to achieve superiority in their lifestyle according to the response of the loyal user interview. The air purifier design can integrate into their life because the design is a comprehensible geometric shape, and the color and material symbolize prestige and superiority. In addition, most of the respondents consider the relationship between the products and home interior. As dark colors are often found in furniture like sofas and doors, the black glossy finish can readily integrate into the home environment. Hence, the Nordic style can fit Hong Kong users' taste and lifestyle.

4 Discussion

4.1 Discussion of the results

The above findings support the thesis of the research paper. The results can be summarized in two parts: Impression of products and home environment. The former explains how the public perceive the products of Nordic design. From the survey and an interview with a loyal user, it is noticeable that B&O products are often described as "simple", "aesthetic", and "luxurious". The latter one is related to the living space. After conducting the interview with the staff, we can understand that the B&O company is trying to achieve home environments which are highly functional and harmonious with the design. Subsequently, our finalized design attempts to create an air purifier blending with the home environment. Hence, it is believed that these two parts works together to accomplish the ultimate goal: Nordic lifestyle. It is a way of living that designers and the public try to pursue and is the fundamental value of product compatibility with the home environment.

4.2 Research implications

Based on the survey above, some respondents have chosen the words "simple" and "luxurious" when viewing the B&O brand and products. These are the features that the B&O designers would like to communicate with consumers. It is also common to receive similar feelings when viewing other Nordic designs. Thus, it is believed that there is a term illustrating this

relationship between designers and the public: Auto-visibility. It is coined by Bang & Olufsen and one of the intrinsic values of B&O's ideologies (Krause-Jensen). Auto-visibility is a non-verbal communication in which people can understand the brand identity through the products' appearance. When people see the products, they will trigger the feeling of simplicity. The understanding of this term can be deepened if the product is embedded in an environment. Naderi, et al. (2020) explains that emotional and behavioral responses can be enhanced when the products with high-level elements are integrated with the environment. In Scandinavian design, a feeling of coziness and aesthetics (hygge) is expressed due to the compatibility of Nordic products and home environment. In other words, the emotional responses may be reduced if the products are separated from the environment. Therefore, it could be most favorable to present the taste of Scandinavian design when the products are allied with the home interior.

Furthermore, the concept of product and home interior congruence in Nordic style has been localized in Hong Kong. Under the contemporary cultural exchange, it is able to spread the Nordic style and localize in Hong Kong. Product design acts as a medium to spread the idea. When it is introduced in Hong Kong, it will adapt to the Hong Kong culture. More people will accept the idea due to exposure and its positive impact. Besides B&O, Ikea is an example that successfully implemented the concept in Hong Kong. People would like to buy furniture like wardrobes and chairs that match their home interior. Subsequently, this idea will gradually localize and evolve which can integrate into Hong Kong people's lifestyle.

4.3 Limitations and further research

Due to limited time and resources, we only interviewed two staff in the Causeway Bay storefront. The result of the interview may be constrained by a limited sampling of both interviewees and shops. Shops in a different location may have non-identical demographics. Therefore, we may have to interview more staff from a different chain store. For the survey, the age range of participants clusters on one particular sector which is the age between 18-24. In further research, more participants from other age ranges shall be surveyed to demonstrate a more comprehensive result.

4.4 Improvement for B&O

Some improvements can be made by the B&O company. The first one is the similar form. Most B&O products are constructed with geometric forms like cones and cylinders. This feature is easily adopted by many other companies. Thus, most of the products look similar in the market. For example, the Beoplay A1 is a flat cylinder form and has small fillet edges, making it similar to the JBL Clip 2. The similar form makes B&O difficult to outcompete among various brands. Therefore, better customization and individualization of the products can be done to fit the users' lifestyles. Apart from the form, color and material selection are important considerations. Being able to choose the right combination of colors and materials can integrate the products into the home interior seamlessly. Also the results from the interview also point out that there is some disconnection problem that interrupts the user experience. Since B&O focuses on the high-end market, the sound quality and performance should be up to standard as the price paid. From Figure. 1, people highly value the sound quality and the price when using the consumer audio system. The above issues deter people from choosing B&O products. To fulfill the expectation, B&O should upgrade the performance and tech spec of the audio system.

5 Conclusion

By conducting the survey among Hong Kong citizens and the interviews with the B&O storefront staff, this study determined that Nordic design considers the material, coloration and form relationship between the product and the home interior. The form of the product is designed to fit the Nordic interior and bring the natural elements inside the home. B&O also believes that forms take a prior position than function, that they put more emphasis in product and interior congruence. Besides, the brand maintains a loyal customer base by creating a harmonious living environment for the user. Emotional connection between interior, product and the user thereby enhanced. It is suggested that product brands should take user's living space as consideration in their design. Since different counties have their own style of living, brands can investigate the home interior of their targeted market region. Instead of a "universal form" of design, an "interior-based" tailor-made design can develop their own unique tastes and lifestyle. Therefore, this design strategy allows cultural localization in Hong Kong, making the products and brand sustainable.

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