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Aesthetic flexibility in the management of visual product branding

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Abstract

This paper will investigate the strategic design decision-making of an in-house designer in a company with a large product portfolio, with respect to how designers plan for future visual alterations of the product. In-house designers have to think strategically about the creation of recognition and differentiation through design because they influence the company's overall strategies. Therefore, while balancing aesthetic and semiotic qualities of the product, designers have to consider current as well as future needs for recognition and product differentiation. The ability to do so is affected by cost and brand positioning strategy. An exploratory study was setup to investigate what design strategies could be found in an industrial design team employed by a company. The study exposed how in-house designers could strategically incorporate aesthetic flexibility in product parts in order to create opportunities for faster facelifts or redesigns. The importance of managing carry-over details in larger product portfolios was also discovered. To carryover parts from different products is an important way for a company to save money, development time andat the same time increase brand recognition through repetition. Carry-over can be an aid to enhance visual recognition, but it can also be a hindrance when the designer needs to create differencing design values. Most products have a lifespan before they need to be updated or redesigned, which depends on the competition in a product segment. This makes it extra important for designers to have an understanding of when to incorporate carry-over details and when not to. A model was created to describe how carry-over details, design cues and aesthetic flexibility could be managed in a product portfolio. The model is based on Rune Monö´s works and brand management literature, with an emphasis on the brand positioning framework of Point of Difference, Point of Parity and brand extension by Keller et al.

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1. Introduction

There is little written about in-house designers and what aesthetic strategies they may use when working with branded products in manufacturing companies.An in-house designer can be both a consultant or employed by a company, but the key factor is that they are working inside a company and only with its products. In this article, in-house designers will be defined as industrial designers employed by a company and working within a design team. They will also be responsible for the strategic design development of the company´s product portfolio. Person et al.[1] describe this strategic design development as to create a consistent and distinct brand image by having: *"(1) to facilitate recognition and (2) to transfer beliefs that consumers have concerning one product to another falling under the same brand name."*

Researchers [2, 3, 4, 5, and 6] have recognized that designers work strategically by creating aesthetic product features or design cues in order to create recognition amongst consumers and embody the company´s brand values.Many day-to-day activities ofin-house designers consist of reusing design features [7] or designed parts and incorporating them into new designs.When a designed part is moved from one product to another, this is called a *carry-over detail*. From a product management perspectiveUlrich & Eppinger [8], Sanchez [5]and Diffner [9] state that companies strive to rationalize as much as possible in order to be able to respond more rapidly to changes in the market. The authors also state that depending on the product and how often or how fast it has to be changed components and parts can thenbe further organized into *Modules*.

Modules and details' are constructed by a number of physical components and parts that implements the functions of the product. The main benefits of modularity are reduction of costs, possibility to maintain and increase product variety, add-on products, customer adaptations more rapid upgrading time, rationalize production, reduction of ordering time, reduction of system complexity, easier maintenance, easier repair and shorter development time. In-house designers need to consider many of these factors during adevelopment project.

Increase in product variety, *add-on products* and *customeradaptation,*for instance, can create possibilities to make aesthetic variations within a designed product and in its product portfolio. For example, the batterypack on a Hiltipower drill (www.hilti.com), the brushes of an Oral-B electric toothbrush(www.oralbnordic.com) or a garden tool handlefrom Gardena (www.gardena.com)with interchangeable spades and rakes are all examples of products from companieswhostrategically work with modular or carry-over details across their product portfolios.Carry-over details can also be handled less explicitly as in the case of theVolvo XC90, which is marketed as a small cross-country car despite being a modified V70 [9]. However, too much modularity and carry-over within a product portfolio can dilute the visually differentiating valuesand can be devastating for some companies, especially those which depend on recognition through product design. In-house designers are also responsible not only for the development of contemporary products but also for future products, ensuring that these are in tune with the company's brand values. The challenge for an in-house designerlies in creating enough aesthetic flexibility in the design of a product portfolio that all these aspects can be strategically managed in order to increase the value of the company brand [10] and create conditions for expansion of the product portfolio.

The aim of this paper is to elucidate the possible design strategies an in-house designer can use when working in companies with strong brands and large product portfolios. Specifically, the objective is to study how designers create aesthetic flexibility in a product, within a product range, and across a product portfolio to sustain recognition and communicate brand value in a consistent manner over time. What parameters influence the design process from an aesthetic perspective?

2. Theoretical framework

Research on aesthetic flexibility is an important factor for companies working with product portfolios in order to save money and development time, as it can increase brand recognition and build brand equity for the long term.

In-house designers typically work in the borderland between the marketing and engineering functions in a company. They need to conceptualize the company's brand values through product design, and at the same time

make sure that the design concepts are producible. Usually, there are three ways a company introduces new products: as a totally new brand, as a brand extension, or as a combination of an existing brand and a new brand [10].Creating a new brand is typically very costly, and the strategic planning is usually done by brand management and marketing rather than the design team itself [10, 11].Brand extensions, on the other hand,are feasible for more companies and will be further explored within the context of this paper.

2.1. Brand extension

Brand extension is defined as *"when a firm uses an established brand name to introduce a new product"* *[10]*.Kapfner [11] and Keller et al. [10] list some of the most important reasons for brand extensions:

- Improves the image of the brand. A new extension can add value to an already existing brand line.
- Gives consumers quality and trustworthiness ina new product.
- The brand can't afford individual marketing strategies forits products.
- Gives consumers more to choose from and to discover other products from the company.
- Reduces the cost for marketing because the customers have prior knowledge about the product. Marketing only needs to focus on promoting the new product and not a new brand.
- Costs of brand elements and design development are small due to reuse or minor changes.
- Some categories are regulated bylaw;examples include cigarettes, spirits and medicine.
- Efficiencies in packaging and products by reusing components or parts.

Farquhar [12] classifies brand extensions into two main categories:category extension and line extension. *Category extension* is when a company extends its brand into an existing category to compete with other established product brands. Categories can be constructed by the market through how companies compete, but also by consumer associations. Whan Park et al.[13] describe consumer associations as both feature similarities between objects (products) and conceptual similarities that may appear to be more or less consistent. Conceptual similarity is often constructed by several abstract meanings such as profession, status, high price, compelling design, etc. An example of this is that both Seiko and Rolex belong to the watch category but only Rolex are associated with luxury and high status.

Line extension(or range extension) on the other hand is when a company is expanding within itsexisting brand line. According to some marketing researchers [10, 11],80-90% of all new products introduced during a year can be considered as some type of line extension. This is one of the first methods to use when a company wants to grow or increase its value. Kapferer [11] lists seven ways to expand a brand line, three of whichare relevant for design cue development:change of format and size, new companion products (shaving cream to razor products) and brand-specific features (or design cues).

Vertical brand extension is a version of line extension, but in some respects more similar to category extension. The company creates "two products from one" by creating a professional, luxury or low-cost version of an existing brand product. One example is Bosch, whichcreated the blue professional series and the green DIY (Do It Yourself)series in order to target different consumer groups and price points [10].

2.2. Revitalizationand redesign

For different reasons, a company can be in decline and in need of revitalization [10] or a redesign to regain brand equity or even to survive. New competitors, changes in customer taste, new technology, poor management and other reasons can be drivers of renewal.A regressingbrand has a greaterneed of "revolutionary" changes to its product portfolio,and the designer needs to be bolder but also in tune with current and future trends when changing or creating new aesthetic values. According to Keller et al. [10],companies with a prior high brand value and recognition have the best chance to succeed. In these cases it is imperative to fully understand the company's brand uniqueness, strengths and favourability in order to judge what values to keep, enhance or distance from. Revitalisations of brands are therefore something that haveto be done carefully. A **redesign**(or *facelift*) of a productison the other hand more common. Car companies for instance have strategictime plans on

how they manage facelifts,extending several years into the future. Redesign is usually done in order to keep up with competitors or to makeminor changes to brand values;in other words, an "evolutionary" strategy[11].

2.3. Recognition: POD and POP

The POD and POP concepts of Keller et al.[10] have many similarities to the concept of *Most Accepted Yet Advanced* (MAYA), first expressed by designer Raymond Loewy in the 1950s [14]. Both concepts describe the ambivalence a designer has to manage when creating a design for a company, where he/she has toenhance recognisable features but also make the design look new and interesting to the customer. Person et al.[1] interviewed senior managers who had been involved in strategic design decisions.They found that the main strategic decisions senior managers were choosing between were similarity or differentiation in the product design; design decisions weremadeto accommodate both the product family and market competitors.

POD stands for *Point Of Difference* and is defined as *"…strong, favourable and unique associations…"* that consumers narrate to the product portfolio andthe company brand and which should not be found in a competing brand. Unfortunately,Keller et al.[10]do not describe in detail how these associations are createdin product design. A second key to strong PODs islong evolutionary design strategies sprung out of the company's history or brand DNA [3, 6, and 11]. They are also important factors when redesigning, revitalizing or extending a brand.

Point OfParity (POP),on the other hand, is described as those *"associations that may be shared with other brands"*. Keller et al.[10] state that POP can be divided into two forms: Category POP and Competitive POP.Category POPsarerelatedto*YetAccepted*in MAYA and are those associations that arenecessary for the brand to enable recognition by thecustomerwith respect to which category the product belongs to. For most companies, it can be equally important to belong to a strong category as it is to be perceived as unique. Prototypically, product gist andbasic product sign[11, 14, and 15] are models trying to explainhow the product form createsassociationsto a category. When the brand is expanding into a new category,it iscritical that there is a thorough understanding of the target category POPs.
*Competitive POP*aredescribed [10]as a strategic way of using the similar associations as a competitor to "defuse"its brand PODs to make them "break even". For instance, today the leading smartphone brands lookand interact in a very similar way.

2.4. Design cues

When designers create new design concepts for a product portfolio they work with visual "building blocks" ordesign cues, which are the meansfor the designer to create recognitionand brand identityin products[3, 6, 10, and 15]. Karjalainen [6] states that cuesare *"often features in the product that have relatively distinct object boundaries (e.g., the kidney grill and quad headlights of BMW cars)"*.Adesign cue can be a distinct "POD" that visually distinguishes a product from its competitors or a way to be identified to a category "POP".Often these design cues are merged together in the product design in order to create a visual experience of wholeness.

2.5. Champions, star and lead products

Large product portfolios havechampion, lead or star-products [7, 8, and 18]that will get special attention from designers and brand managers, mainly because a consumer cannot recall all the products in a company's portfolio. Keller et al.[10] define these products as those that consumers will first think of when the brand is mentioned. Karjalainen [6] statesthat designers working with these products need to be*"…more sensitive to issues of brand heritage and that is organized around so-called lead products. For lead products, the design effort of the company implies a focus on product features that have more explicit and more widely understood references to core brand values."*They are the physical ambassadors of the company's brand.

3. Exploratory study

This exploratory study was set up to investigate how the aesthetics of a design can evolve within larger product families and what design strategies can be discovered. The notion was that in-house designers have to think strategically about how they create the design because they haveto consider a variety of different aspects, from the design history of the company, to carry-over detailsandproduction methods. They arealso responsible for design updates, customer adaptations and redesign of old products. To investigate the nature of these tasks, an exploratory study [16] was carried out. Miles and Huberman's [17] model of qualitative data process wasused in this study to analyse the collected data. It consists of four phases ofdata collection, data condensation, data display, and conclusion drawing/verification. Data collection involves the gathering of qualitative information through different methods. Data condensation is part of the analysis process accomplished by selecting, simplifying and abstracting the collected data. Data display is the process of organizing and assembling the collected data. Conclusion drawing/verification is a two-part analysis process where the researcher first draws conclusions out of the material, and then verifies and tests the findings.

Thestudy was organised at a large international company situated in Sweden in order to investigate how the design team had worked strategically with the design of its products. The company had recently undertaken a major redesign effort of itsentire product family and all ranges, which had taken approximately six years to conduct. The chief designer, a surface designer and an engineer who had been involved in one of the recent redesign projects were interviewed. All three respondents weremale and had more than fiveyears of workexperience in their respective professions. The study employed a semi-structured interview guide, focusing on how the company's product development process was devised, the contribution of each participant to the design process, and the final design of theproduct. Data collection was complemented with visual material, which was introduced as mediating objects during the interviews. This material included four printed A4 sheets with photos showing the product fromdifferent angles, and one A3 sheet with a horizontal time line (labelled "project start" and at the left endpoint and "project end" at the right endpoint) to aid the chronological discussion of project events during the interview. The interviews, which lasted between 60 and 90 minutes, were audio-recorded and later transcribed. Supplementary field notes [16] were also taken during the interviews. The respondents used the visual material to talk about their involvement, the design process, and to illustrate design features of the product.Coding and searching for themes in the collected material was conducted through searching for verbal references to the working process, aesthetic strategies, brand values and strategically aesthetic decisions. Data was condensed and displayed in order to identify patterns in the transcribed verbal and visual material.

4. Results

The analysis ofaesthetic strategies and decision-making during the project led to insights regarding how the design team was integrated in the product development process of the company. The study revealed that the design team needed to work with several departments in the company, both in sequence and in parallel. The team worked regularly with Product Management, Research and Development, Marketing and Production throughout the whole development process. In the design concept phase they worked mostly with Product Management in order to make strategic design decisions within the product portfolio. Three key findings werenoted relating to strategies and product aesthetics.

*Firstly,*the product management team and the design team had to plan for which parts to be designed for a new product and which to be "carriedover" from previous products. The carry-over could be done within the same product range but it could also be done between different products in the same family. While other industries, such as the car industry, have a strategy to minimize the use of "carry-over" design details between different products, the studied company had to employ a different strategy. Due to itslarge product portfolio with several similar products and the need to cover different markets and customer needs, ithad to "carryover" more of itsdesigned details. The chief designer decided what design cues should be carriedover from previous products and how these should be redesigned in order to strengthen or create new visual PODs. The designer had to

balance the risk of both dilutingthe visual PODs but also strengthening the company´s recognition through the repetition of designed parts and design cues.

Secondly, the size of the company's product portfolio created a need to reuse components in several different products in order to lower the number of details, thus reducing cost. The chief designer needed to strategically considerhow the designed parts could be incorporated in other products of the portfolio,and not only how to enable carry-over from a previous generation.

*Thirdly,*the products were expensive to produce and had to have a long lifespan, whichmade it necessary to createdesign strategies *within*some of the products. The company had to havedesigned parts that could be redesigned prior to others, creating a necessity to allow more "aesthetic flexibility" in some parts without interfering with the overall visual quality of the product.

Results from the study indicate that designersneedto considernot only present or future designs, but also lateral development, including the management of carry-over details and design cues between product ranges. However,being too strategic in a product portfolio, by the sharing of components across products, also poses risks. Diffner [9] states that too much sharing of components can make car companies loose brand differentiation (PODs), especially if components are shared between mass-produced and luxury cars. This is called *brand corrosion*. Major car groups like VW experienced this when 70% of itsparts were shared between Skoda, Seat and Audi, as customers did not see the reason why they should buy the more expensive premium car brand (Audi) when nearly all the parts were the same in Skoda and Seat. As previously discussed, brand extension is a primary objective for in-house designers. Therefore, we propose a model (Figure 1) that illustrates the different strategies a designer has to manage when creating brand value through design cues.

4.1. A model of brand extensions in a product portfolio

Inspired by the work of Monö [4]and brand management literature [10, 11, 12, 13, and 18], a modelisproposed(Figure 1)whichdescribes the most common brand strategies such as brand extensions and brand revitalization.The modelillustrates how a competing company´s product portfolio (the cube-shaped figures), brand/product history and current product portfolio (the spherical-shaped figures) areall influenced by brand management strategies. The model is described in detail in the following sections.
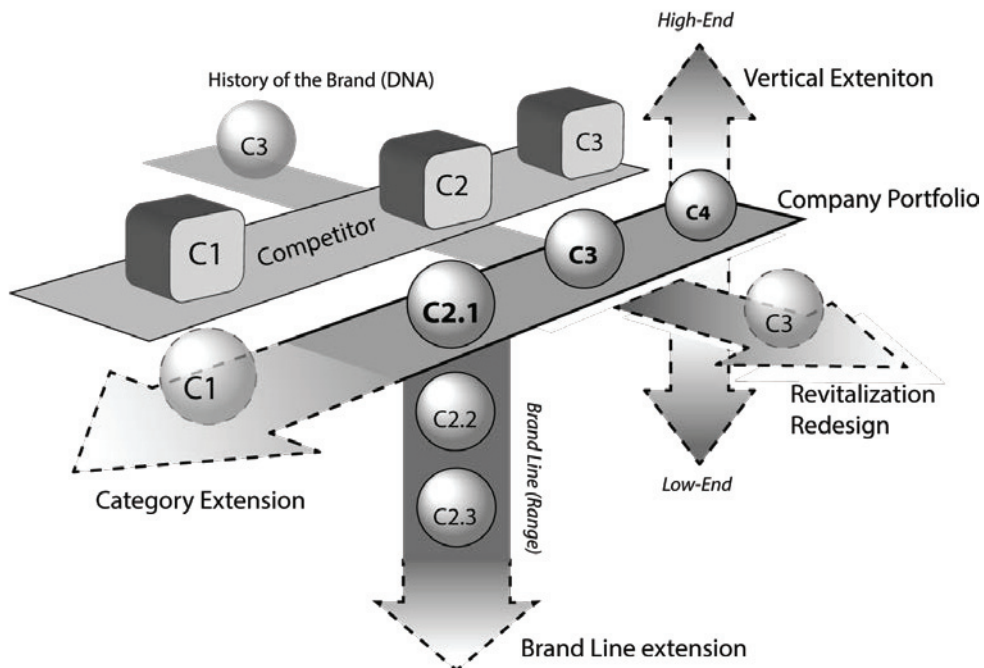

Fig. 1.Model of a company´s product brand portfolio extension strategies.

4.1.1. Brand extension strategies

In a brand extension, the major strategic design work determining brand value, including defining brand DNA [3, 6, and 11] and brand recognition (POPs and PODs), has already been done. The work of an in-house designer is to interpret design cues, create new ones and use carry-over details to compose expansion products into new categories or brand lines to expand the portfolio.

When a company decides to move into an existing *category* (C1s)the designer has to take into account what POP associations and current product gist´s [14] are present in the category in order to create category recognition for the expansion product. Champion products in the category can be targeted as a strategy to "defuse"its design PODs or to be used for uncovering existing design cues connected to the category. Generally, the category influences the design in a more profound way and it can be harder to implement carry-over details, but the designer has a greater opportunity to build in aesthetic flexibility for future line expansions. An example is the design of Hilti's power drills, which visually look very different from Hilti's demolition breakers, sharing only the colour scheme, logo and one design cue between the two product ranges.

In a *Brand Line* extension (C2.1, C2.2…), carry-over can be a very powerful method to reduce costs and to sustain visual recognition. The designer has to be true to the original design cues and therefore implements only minor adjustments in order to create differentiation between variants. This can include adding a colour to an existing colour scheme or changing/reducing design cues in order to fit variants of various sizes, etc.

Vertical Brand extensions (C4) are more similar to category extensions in that the company wants to enter a different affiliation such as luxury products or a DIY segment. The main difference is that the company also has to create PODs and design cues that differentiate between its own products within the portfolio. Carry-over can be used but with care, as it may transfer unwanted recognition.

4.1.2. Brand revitalization and redesign strategies

Revitalization(C3) is a more profound change of the company's visual DNA [6, 11]. Here, design cues can be changed more drastically, discarded and new ones can be created to replace old ones. For the designer, it is important to reinterpret strong brand valuesor changethem,but at the same time maintain beneficialdesign cues from, for example,champion products. As with vertical brand extension, carry-over should be done with care but there is a greater opportunity to build in aesthetic flexibility for future expansions. As described previously,*redesign*(C3) is a more common and evolutionary way to change the visual expression of a portfolio. The strategies found in the study can be applied here, especially within a large product portfolio withcostlymanufacturing processes. It is essential to carefully consider champion products in a portfolio, astheyact as "forerunners" to extensions and influence the rest of the portfolio.

5. Discussion and conclusions

This article aimed at investigating if in-house designers' strategic thinking could be exposed and how it would influence a product's extension process. Limitations were that it was a small exploratory study, focussing on only one company, and due to confidentiality reasons the company and the case product could not be presented in this article. However, the recent redesign process that the company has gone through and the large product portfolio with high-tech products revealed that it was the right type of company to investigate regarding carry-over and aesthetic flexibility. We also believe that the employment of the designer and the complexity of the product portfolio can reveal and explain drivers for strategic design thinking.

The implications of this research are important for designers as well as managers when they are making strategic decisions related to design alignment acrossproduct ranges in aproduct portfolio. This studyhas illustratedsome of the challenges related to design complexity byin-house designers when extending or redesigning a product portfolio. Through the proposed model (Figure 1) we describe the discovered aspects of carry-over details and in what way a designer might infuse aesthetic flexibility in aproduct family. Product Managers and Brand Managers can see the beauty in both saving money with fewer components, and at the same time increasingbrand recognition through repetition.Carry-over can be an aid to enhance visual recognition but it can also be a hindrance when the designer needs tocreate differencing design cues (PODs). This makes it extra

important for designers to have an understanding of when to incorporate carry-over details, and when not to.The study also illustrateshow a designer can incorporate aesthetic flexibility in product parts and design cues in order to create opportunities for faster facelifts (redesign). The model needs to be further developed to incorporate more aspects of brand development, and it has to be evaluated by designers and managers. Both aesthetic flexibility and carry-over are important aspects of strategic design development that can influence production costand future product recognition.

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