Crowdsourcing Designers' Insights Into Collaboration

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Abstract Aligning between design and marketing is important to match new product development to market opportunities. However, challenges to achieve a cross-functional alignment have been little discussed. In this paper we go beyond corporate culture to collect and analyze designers' comments regarding collaboration. First, we briefly describe the gaps between design and marketing theoretically. Secondly, we crowdsourced the comments from the social network platform, LinkedIn, that design practitioners face when they work with marketers. Our collected comments confirmed (1) ongoing and (2) fixed hurdles they face and provided us with insights into how to help them collaborate with marketers. We discuss our findings to specify their contributions and implications toward new product development.

Key words Design, marketing, cross-function, crowdsource, new product development

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New product development is risky [Cooper 1998]. In particular, a challenging part of execution is to translate market data into design information. Theoretically, there exists the chasm between marketing and design. Traditionally, advertising agencies conducted market research, formulated sales concepts and wrote a copy supported by artwork [Phillips 2004]. More recently, they extended their services to include form styling to differentiate their products visually. As product complexity increases, this simple sequential process increases development cost while decreasing product quality [Phillips 2004]. A similar issue has been raised in another cross-functional cooperation such as between manufacturing and marketing [Song et al. 1997].

Interestingly, designers are aware that they work with marketers, but that they find it difficult to work with them [Beverland 2005]. Although tensions between design-based innovation and brand-driven management need to be managed, designers' new ideas are often resisted by business-dominated culture [Filson and Lewis 2000; Joziasse 2000]. Therefore, industrial designers are often asked to temper their originality [Heskett 2002].

Therefore, researchers have argued that designers should be provided with the access to a range of business functions [Walsh 2000] through several tools. An area that only recently has received attention is how to translate market data into design brief [Petersen 2011]. Here is where this paper makes a contribution to product development, exploring opportunities to improve the communication between marketing and design.

This paper is organized as follows. First, we describe the current situation of marketing-design collaboration to clarify theoretical challenges. Nest, we describe crowdsourcing using online social networks to develop a method for systematically gathering insights from creative professions. Then, we reported the comments collected from a crowdsoucring method, discussing our findings for future research.

Introduction

1. How Marketing Researchers See

Design"Designers don't just put cosmetics on the skin of a product!" During an interview with a male graduate student at Ontario College of Art and Design in 2009, he argued that designers play a key role in developing a new product. However, marketing researchers often imagine that the work done by a designer is mere a "plastic surgery." In general, the objective of much marketing research on the topic of product design is to understand whether changing a product form affects consumers' behavior including their aesthetic preference, their product evaluation and their product choices.

Many marketing researchers aim to identify a better "face" of a product in order to attract greater attention from consumers and to increase the chance that their product is included in the consumers' consideration set, or to provide greater satisfaction to the consumers after the product is chosen. The primary reason that marketing researchers often limit the role of designers with styling is that they pay far too much attention to the "outcome" of designers' activities. Therefore, many designers who perform various activities such as researching users, developing and evaluating concepts, and coordinating concepts with business strategists find it difficult to communicate with marketers. Put simply, marketing researchers shed little light on the "process" of designers' activities.

The good news is that evidence demonstrates that when designers go beyond their purview and get involved in business tasks, the commercial performance of their firms increases. For instance, a study published in the Journal of Product Innovation Management found that when many design apprentices and students from design institutions are involved in new product development projects, the profit and the growth rate of the projects increase [Gemser & Leenders 2001]. We expect that it will not take long for marketers to recognize the commercial contributions that designers make to their tasks. Until

then, designers should get familiar with business terms and practices to better communicate with marketers. In the end, design-conscious marketers work best with business-savvy designers to produce stylistic as well as profitable new products.

2. What Designers Say About Marketers

The typical briefing that designers receive from marketers at the start of a new design project is more or less useless for generating new ideas. In the spring of 2011, I spoke on Inspirational Design briefing at an Industrial Design Society of America (IDSA) event in Los Angeles. Everyone broke into laughter when I asked: Who provides the best design briefs: the marketing or the engineering department? Over the laughter, I heard that marketing briefs are difficult to understand. Designers see a clear disconnect between the insights marketers provide and the concepts designers generate. The disconnect between marketing and design has been numerously found during my two decades in design consulting with more than a hundred projects under my belt.

Then, how do designers collect the insights marketers often miss but they need to build their concepts? Surprisingly, insights often come from the client's branding studies either commissioned by third parties or conducted by design consultancies. These studies provide a template of visual languages including metaphors and images that designers incorporate into their developing concepts. When no visual language is provided, designers often develop this language from scratch along with developing concepts.

In actual practice, designers often set marketers' input aside and start a project by looking at the advertisements or the websites of their clients and competitors. They collect images and stories concerning the uniqueness of each product and make fleeting trips to the products' point of purchase, taking pictures and playing with the products. If the budget allows, they purchase a sample product for the future disassembly and destruction in the studio. Ideas for new features often stem from the designer's personal experience -- including his cultural and social background -- and their personal research into art, fashion, architecture and entertainment. Designers often read the same magazines, visit the same sites and belong to the same online groups,

and thus their sources of inspiration are often identical. I even heard a CEO pronounce: "If I see one more styling board with an iPod... "

What reasons do designers offer in support of their concepts? Their research findings are usually compiled into a PowerPoint, or QuickTime presentation, augmented with a booklet, posters and collected artifacts. The conclusion usually contains an activity analysis, communicated by the use of storytelling. These inspire various user segments and provide possible new user scenarios. The result is a list of unique selling points and a recommendation for design direction. To explain their proposed concepts, designers provide a map showing the client's product together with the competitors' products on a coordinated grid. The axis usually represents competitive parameters, such as features and aesthetics expression and brand attributes.

The key is selecting relevant but independent parameters to communicate relevant differentiation. For example, during the past thirty years, psychographics have been used for user profiles such as "Joe 6-Pack" and "Soccer Mom", while failing to show any correlation to actual product purchasing behavior, rendering these profiles useless as metrics.

At the end of the day, designers present three to five realistically rendered concepts from which they have to select one for detailing. Often flash competes contents since no objective metrics have been presented, so it is little wonder that design is still seen as art rather than as being business driven [Yankelovich D. & Meer D. 2006].

3. Crowdsourcing using online social network platforms

New design research methods are vital to an organizations' ability to sustain their competitive research advantage and one way to improve data collection while reducing cost is crowdsourcing. Not only established companies such as NOKIA, BMW, IBM and P&G have their own crowdsoucring platforms but also independent crowdsourcing platforms such as X-Prize, OpenIDEO and InnoCentive have been used for many years.

As for the independent crowdsourcing platforms, they have similar systems. Generally speaking, clients launch challenges to communities in order to solve problems and communities manage challenges to

reward participants for their contributions. For instance, X-Prize uses a range of media to announce challenges and manage them as a traditional contest with large monetary reward. OpenIDEO leverages the IDEO network to build and manage launched challenges. Innocentive uses traditional communities and contest procedures, relying on extrinsic motivation and monetary rewards for contributors.

In order to gain experience with crowdsourcing methods before conducting our own crowsourcing projects for designers, we collaborated with Stanford Persuasive Technology Lab for two years. We experimented several approaches to briefing and formulating the challenges on a range of platforms such as OpenIDEO, Chaordix, Facebook, LinkedIn and Twitter. More specifically, we have launched 17 design research challenges with our research partners including Peace Innovation Lab, ICEAW, Norway University, and People-People, and crowdsourced comments from various social network platforms.

Generally speaking, we found that online crowdsourcing platforms provide useful insights into each challenge. However, we additionally found that launching challenges to appropriate professional groups is critical. For example, certain professions gravitate towards humanitarian topics (e.g., animal rescue) while business issues engage others professional groups. Larger groups tend to engage in incremental challenges (e.g., What is Scandinavian Design?), whereas smaller groups gravitate towards breakthrough challenges (e.g., How can journalists assist in reducing gang violence?). Our experience leads us to conclude that we should use LinkedIn and launch short challenges with iterative procedures.

4. Empirical studies

4. 1. Objectives

We want to listen to practitioners regarding how marketing sees design and how design sees marketing. In particular, we are curious about the challenges that they face when they work together. Therefore, we conducted a one-month crowdsourcing project using several groups on a social networking platform called LinkedIn. Following is a more detailed description about our research procedure.

4. 2. Procedure

Firstly, we launched our two articles on The Huffington post in November 2011 to target the same social networks on LinkedIn. According to Wikipedia, The Huffington Post is an American news website, content-aggregator and blog founded by Arianna Huffington featuring columnists and various news sources. It has an active community with 9000 bloggers from politicians and celebrities to academics and policy experts who contribute on a wide range of topics and with over one million comments made on the site each month. In order to encourage design practitioners to express their opinions, we initiated a discussion by posting the following challenge: "Designers tackle a wide variety of problems with marketers. What are the hurdles when working with marketers?"

Next, we approached four social network groups in the LinkedIn collectively representing over 240,000 members and asked them to leave comments on their challenges. The selected four groups are Design Research Group, Design Management Institute Group, Industrial Design Society of America and Design Thinking Group. We encouraged members in each group to discuss their challenges. We paid extra care not to influence the flow of their conversation. Note that the conversations were not made across groups.

4. 3. Data collection

Conversations in 4 groups ran for a month. We collected every single comment and analyzed it. Note that the comments that authors probed or the comments that are irrelevant to a given topic were discarded. For example, the comments such as "Awesome response" or "Do you know or have some examples, like literature or case studies, which discus those so called "formal design plans" that marketers can produce?" were not analyzed.

In total, we have collected 53 comments and eliminated 13 irrelevant comments from the two questions. In particular, we have collected 23 responses from Design Research group (12,000 members, representing 0.0018), 12 responses from Design Management Institute group (5,000 members, representing 0.0024), 5 responses from Industrial Design Society of America (9,000 members, representing 0.0004), and 5

responses from Design Thinking group (2,5000 members, representing 0.0020).

4. 4. Findings

We divided our collected comments into two groups depending on whether problems are ongoing issues or relatively fixed issues, and then explored further any opportunities to improve their collaboration. Note that our collected comments generally confirmed the previously discussed challenges in collaboration between marketing and design.

First, as for the ongoing issues, marketing and design are saddled with outdated assumptions inhibiting them in effectively communicate each other. Comments can be summarize such that, for instance, (a) market segmentation is not correlated with purchasing behavior, (b) marketers concentrate on successive incremental provable improvements, (c) marketing input is limited to post-design evaluative studies, (d) marketers and designers do not translate corporate philosophy, strategy and market data into design brief, and (e) marketers and designers undervalue the importance of communication and timely updates on changes in the assumptions and decisions.

As for the fixed issues, marketers and designers have cultural differences, which leads them unable to understand each other's thought processes and reasoning correctly. Comments for this group can be summarized such that, for instance, (a) marketers focus on corporations' needs, while designers focus on user needs, (b) marketers formulate and test hypotheses, while designers work on a project without generating and testing any hypothesis, (c) marketers leverage existing data to describe user behavior, while designers investigate new trends for new solutions, (d) marketers address short-term problems, while designers investigate long-term scenarios, and finally (e) marketing is considered a strategic resource, while design is viewed as a tactical resource.

5. Discussion

Although most problems collected from design professionals have their own solutions, two problems have no immediate solutions, which offer the opportunities for further research: (1) market segmentation is not

correlated with purchasing behavior and (2) marketers and designers do not translate corporate philosophy, strategy and market data into design briefs.

Note that these two problems are interconnected because no matter what research is conducted, what designers recall and synthesize into concepts for evaluation matters. It is a common misconception that designers perform best when they are sheltered from information, so they are free to let their imagination go wild. What well-intentioned managers fail to understand is, that when designers are not using client's design criteria to define search and ideas, they must necessarily make up their own to create concepts. Leaving out relevant criteria to introduce irrelevant constraints makes no sense and leading firms, such as Steelcase, BMW Group and Rambøll Group do not adhere to this practice.

In an attempt to translate marketing insights into useful information for designers, marketers and designers often use a scenario method and construct psychographics by using marketing data, for example Joe Six-Pack or Soccer Mom. To have a specific person in mind helps designers conduct trade-offs between various design criteria. Unfortunately the context used to construct and evaluate the proposed concepts is illusory. Since previous behavior is the best indication of future behavior, a framing applying metaphor for user behavior may offer a useful solution [Lakoff and Johnson 2003]. Our mental model of the world around us is built on metaphors. These metaphors are combined to understand and communicate new thoughts and increasingly abstract thoughts. In the same way as when creating new technical solutions, though recombine existing elements, needs and product ideas can evolve from recombination of metaphors.

Positioning matrix of brands is also popular to transfer marketing insights to designers. However, it often contains arbitrary axes which are not necessary orthogonal. Therefore, it provides an unclear direction for concept exploration. One positioning matrix, which to the best of our knowledge is untested, is the "Framework for conceiving aesthetics in design as the formulation and construction of meaning" [Folkmann 2010]. Folkman's axis: Aesthetics – Functionality and Directly Display the Idea – Indirectly Mediate the Idea, suspend the four quadrants:

Concept Design, Natural Mapping, Natural Mapping, Anonymous Design and Lifestyle Design, effectively positioning meaning and function.

We know that effective transferring marketing insights into designers' results in improvement in designers' concept development. For example increase strategic information in a design brief result in superior outcome. In addition, tailoring design brief to innovation types, such as incremental and breakthrough innovations, increase project performance [Petersen 2011].

In general, designers require comprehensive knowledge of needs and go though alternating stages of questioning and answering of their concepts, followed by experimenting with a limited number of concepts [Eris 2002]. Therefore, it is important to provide with designer rich and vivid information, which triggers multiple associations that generate memorable inspiration for experimentation of directions and finally synthesis of novel concepts.

6. General discussion

We used a crowdsourcing method and collected the voice of designers regarding the collaboration between marketing and design. We identified two key issues that hinder effective collaboration: ongoing issues and fixed issues. Although most problems have been extensively discussed, we found one hard-to-attack problem, which is, an inherent inability to translate marketing data into design briefs. We focus on this issue, review the strengths and weakness of the tools that marketers and designers use (e.g., psychographics and positioning matrix), and call for future research.

The primary contribution that our work makes to the existing literature is that we empirically confirmed that collaborating or integrating marketing with design is difficult [Beverland 2005]. Although researchers have argued that firms need to manage the tension between design and marketing [Filson and Lewis 2000; Joziasse 2000], no empirical evidence has supported this argument. Furthermore, we review the existing tools that bridge the gap between two groups to propose a new tool that helps them. In particular, our findings suggest that integrating design and marketing needs to listen

to the voice of designers. Future research is called for specific challenges that marketers and designers face when they aim to collaborate.

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Appendix. Four selected comments

#1

This is just a misconception of the role of research and marketing. As a researcher, I am paid by my clients to help figure out what designs appeals to consumers so that they will buy that product. I endeavor to be agnostic about designs. It is not a question of assuming anything about the designer's acumen or process. It is about providing consumer feedback about their work. It is one data point among many that informs the final design. Frankly, smart designers get this and incorporate research feedback into their work. That doesn't mean that they abandon their design ideas, just that they factor it into their "outcomes".

"The primary reason that marketing researchers often limit the role of designers is that they pay far too much attention to the "outcome" of designers' activities. Many designers who research users, develop and evaluate concepts, and work with business strategists find it difficult to communicate with marketers, since marketers shed little light on the "process" of designers' activities." I am sorry but this just doesn't make sense. Why should the marketer "shed light" on the process of the designers activities any more than the designer should "shed" light on the research process. They are two complementary disciplines and work well when egos and schedules accommodate and there is good management of the overall product/designer development process. It is sort of cliché, but it works when they listen to each other but always with the consumer in mind. Neither the designer nor marketing researcher exists without designs that are successful in the market place, however cool the designs might seem.

#2

I think this a great topic but one that has been around too long. It becomes a little frustrating to hear the same thing raised over and over. I think marketing sees design as a highly creative valuable resource in most cases and a valuable strategic partner in view cases. I do also think it is time us designers stepped up beyond just delivering beautiful aesthetics and creative ideas into the relm of commercializing our creative output. As an industrial designer this is I believe our strength, though in the corporate world it becomes harder to do this given all the constraints imposed on situations and designers find themselves having less say at the table. I do think times are changing and things are getting better. I also think we are all in this together and we should all brush those proverbial chips off our shoulders and join the fight together. You've only to look at a man like Steve Jobs to see how when the two worlds come together how powerful it can be. I believe design and marketing have a great opportunity to work together and make a positive change for all.

Pascual, I think what you've experienced from marketing is a lack of understanding about design, many marketers see it as a go to tactical resource and the best marketers out there realize its potential and I fact are practicing some of the key elements of design thinking without really realizing it. A strange irony I think, but one that is true nonetheless.

#3

From my experience these are the most common marketing gaps I have detected

with designers during the last years:

Some designers cannot translate business objectives to design targets and vice versa.

Some others are driven based mostly on their personal taste and flavours instead of their audiences' taste. (This is not bad by default but it requires management)

Most of designers (mostly graphic, communication, media and product) are not familiar with the "point of parity and point of difference" concept. So some conflicts evolve when the business strategy requires a point of parity tactic and the designer by default is tuned up to the point of difference mind set.

Another area is Statistics which are not widely spread in the universities curriculum. Basic data analysis and statistical models based on consumer behaviour models are also good areas to support.

Business vocabulary is also a very important competence for designers in order to translate their designs to business terms (customer satisfaction, marginal benefits, value, profits ect.). Good Design is not by default a good business. But good business is hard to be achieved with a bad design.

#4

It would benefit companies to find some common ground for marketing and design researchers. From my experience marketing and design research fundamentally start at different places and look at the world in opposite directions. Market research focus is on the past to define opportunities in the future; examining existing products/services, competitors, and market trends. Design research focus is on the customer or user, what do the do, how do they do it, what is working/not working, observe gaps/opportunities and test ideas/prototypes. Businesses that encourage collabortion between these two disciplines could look at their business more broadly, innovate smarter and create better widgets or service offerings.

It is much more difficult to collaborate at the point of a design brief, when decisions have been made and it's time to design and deliver a product. At this point I've tried to suggest that a better understanding of the user/consumer is required to design a great product, however the idea of more or different research is usually rejected. I believe this is due to marketing professionals who misunderstand the role of design and are loathe to give up control of the product strategy making collaboration very difficult. My 2 cents!