

# BUT IT COSTS MORE TO DO THAT

## REINFORCING RECOMMENDATIONS THROUGH VISUAL PRINCIPLES

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### DEFENDING VISUAL APPEAL, A PROBLEM WITH INTUITION

Predicting the preferences of users is one of the most important competencies for a business to develop. Without this ability, new products miss the mark and businesses lose significant investments in time and money bringing the wrong product to market. While a range of factors may influence preferences, initial impressions (based on how appealing a product appears) are a crucial factor in determining overall preference and one in which designers are highly influential.

Understanding and producing visual appeal are core competencies for designers. How do designers predict visual appeal? While consumer research is often used to inform and support decisions, products are initially developed largely on intuition and expertise. After some ideation and refinement, a creative director or team simply picks the concepts they think will have the strongest visual appeal (assuming all other requirements have been met equally). This intuitive approach, combined with the well-known inability for consumers to articulate their preferences, provides little information as to *why* consumers prefer certain visual arrangements over others. This creates two key issues for businesses. First, it hinders the development of reliable visual language or visually based insights that can be applied across multiple initiatives. Second, it restricts the ability to defend a concept's visual appeal when compared to more commonly quantifiable elements like cost, manufacturing efficiency, ergonomics, or retail shelf space. Despite the importance of visual appeal to businesses, lack of credible support for this area undermines design's value and often leads to compromised versions of a product.

The development of the Tide Pods package exemplifies these challenges. Despite enthusiasm from consumers during ethnographic research, designers struggled to present the merits of the "fish bowl" shape compared to the seemingly obvious advantages of a more traditional box shape. How could the development team ignore the fact that a box is easier and faster to manufacture, holds the Pods more efficiently, and allows for more facings at shelf? The significant data that exists to support the box design overshadows the enthusiastic yet imprecise voice of the consumer (and designer). Fortunately, the development team selected the fish bowl for its ties to the brand equity and semantic communication of the product's benefits as a cleaning agent. For every example like Tide Pods that ends positively for design, there are undoubtedly hundreds of other projects that compromise their appeal because designers did not deliver information that could be properly weighed relative to other factors.



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While generating comparable research data may help designers engage in strategic level decisions, some designers argue that shifting the conversation away from data might be more effective at raising the value of design within a business. By reducing the perceived value of data by arguing its inaccuracies or manipulability, business might instead come to rely on the holistic, abductive thinking often provided by design teams. This optimistic strategy assumes designers will influence business leaders over time through enough effective storytelling, case studies, and anecdotal evidence. While designers should pursue these strategies to advance their field, technology drivers might accelerate the importance of Big Data within organizations. In a future where even the most basic products are equipped with sensors, known as the Internet of Things, companies and consumers alike will easily be able to track a broad range of preferences and behaviors. Add to this the potential of technologies like Google Glass and you have a world in which businesses can easily collect any piece of data they think may be important. The promise of these technologies suggests that the use of data will likely increase, and designers need to prepare for how their work could be affected by this trend.

Given the challenges defending decisions rooted in intuition, an opportunity exists to build stronger rationale for design decisions in the visual domain. Because the use of data-based decision making will likely continue, designers must evolve their processes if they want to advance the field. First, designers should seek to reinforce their core competencies in aesthetics and visual appeal. Then, new research methods should incorporate the strengths of design and science disciplines without compromising the values of either. Finally, these methods and their resulting findings should be utilized to inform intuition and to support difficult decisions along the product development path.

## **REINFORCE THE COMPETENCY OF VISUAL APPEAL**

Design has contributed a number of valuable processes and philosophies to business organizations over the past few decades. It brings mindsets in observational and ethnographic research, creative problem solving, semantic considerations, and holistic framing that have led to service design and experience design specialties. While all of these contributions are significant and should be celebrated for design's unique point of view on them, all of them can be provided by other business disciplines. The majority of design research techniques have been adapted from psychologists and anthropologists. Semantics and related work comes from experts in human factors. Marketing has always held a relatively holistic point of view; the 4Ps (product, place, price, promotion) are a helpful reminder to consider many facets of an experience. Finally, creativity need not be limited to designers and can often be observed in anyone from R&D scientists to CEOs.

While designers excel in many of the competencies noted above, their skills in recognizing aesthetic excellence and visual appeal are truly unmatched in business. Design students spend years training themselves in "how to see" in ways that others disciplines don't. This fundamental skill forced designers to carry the burden of a "stylist" label for many years, implying the subjective nature of the work and the intrinsic abilities required to do it. Now that most businesses recognize the value of design as much more than an "art department," designers can return to this work and leverage it for more strategic and objective business advantages.

## **COLLABORATE WITH SCIENTISTS AND DEVELOP UNCOMPROMISING NEW METHODS.**

Designers and psychologists alike are interested in understanding what motivates people to make certain choices, to behave in certain ways, and to form certain beliefs. These two disciplines can benefit very much from each other's strengths and contrasting approaches, and in order to work together they must develop new methods that are mutually beneficial. Psychologists, as well as related scientific fields, can bring a rigorous approach to their studies, but this attitude can lead to unusual, unrealistic stimuli or experiments with exceedingly narrow findings that are difficult to apply to real life situations. Designers, on the other hand, embrace intuition and uncertainty and seldom utilize methods necessary for obtaining reliable, broadly applicable knowledge. While many designers know how to create successful products, their approach can make it difficult for them to identify the significant concepts or theories they've contributed to their discipline at large. This is not to say that all designers are merely intuitive artist-types. Certainly, many adhere to meticulous, rational approaches, especially when it comes to human factors or ethnographic studies. However, in the study of visual form and the focus of this paper, designers currently rely too much on their intuition to visualize key objectives into tangible artifacts.

Seminal works on perception including those from Ramachandran and Hirstein (1999) and Reber, Schwarz, and Winkielman (2004) and Hekkert (2006) provide explanations and empirical support for many visual preferences for which designers often have an intuitive sense. These principles include (but are not limited to) problem solving, perceptual grouping, contrast extraction, metaphor, symmetry, isolation of a single cue, optimal match, unity in variety, peak shift, and maximum effect for minimum means. While some of these principles could benefit from further study, these principles provided a basis for the majority of basic preferences that drive visual appeal. By collaborating with scientists, designers can begin to generate data that proves the importance of many aspects of visual appeal that were once considered subjective or marginally important. Businesses like Procter & Gamble, Artefact, and Deutsch have begun forming these types of relationships with successful results.

## **INFORMING DECISIONS THROUGH VISUAL PRINCIPLES**

A study conducted at the University of Cincinnati explored the integration of visual psychological principles into the decision making process of designers. The study focused on the preference for typicality and preference for novelty, two factors that appear to contradict each other but can actually be simultaneously deployed. Researchers hypothesized that educating designers on these principles would improve their ability to accurately predict the preferences for a variety of products for a general audience. To study this, 40 design students took a survey that asked them to pick the products with the most visual appeal for a general audience. Next, an intervention explained the principles through a series of examples and an activity. Finally, designers retook the survey approximately a week later. Their responses were compared to a sample of 80 non-designers who took the same survey (but weren't exposed to the principles).

A key finding from this study is that the intervention's influence over decisions varies based on the difficulty of the decision being made. Results with the largest shifts in prediction from the first to the second survey also featured the largest disagreements between respondents as to which design would be preferred. In other words, these designs would be the most strongly debated if discussed in a concept selection review. Because of this result, it can be inferred that the intervention becomes more influential as the difficulty of the decision increases. Intuitively, this makes sense. When the decision becomes more difficult, designers are forced to think more critically and may evoke elements of their training, including the principles that were the focus of this study.

Despite positive feedback received on the intervention from participants, this study did not result in improvements in predictions of general preference. However, the ability of the intervention to elicit a rationale for decisions is inherently and independently valuable. By providing a framework that generates ideas about *why* a person might like something, designers are empowered to test their ideas and develop repeatable knowledge that could credibly reinforce their intuition. Testing and showing support for design principles will improve the value of visual appeal and designers' influence within a business organization.

## **IMPLICATIONS FOR STUDENTS AND EDUCATORS**

To prepare for the professional business environment, students must experience a broad range of techniques, methods, and principles. While designers should continue to develop the skills to create and communicate useful, usable, and desirable experiences, educators should provide more meaningful methods for evaluation, especially in terms of generating reliable data. This is currently lacking in both design schools and professional design teams and is an opportunity to arm students with more persuasive arguments that support their decisions. Not only will this help their design work to be better accepted, but it will also allow them to constructively question and engage in research created by other disciplines that may be in opposition to their own recommendations.

While often considered a subjective element of the design discipline, educators can help students identify the common patterns of aesthetic and visual preferences by conducting research with empirical results. By leveraging the work of psychologists in the fields of visual science or perception, students will have a better basis for arguments on visual appeal. Additionally, exploration by designers in this field could yield important discoveries that their counterparts in psychology may fail to explore.

When design intuition unites with scientific methods, designers will reinforce their arguments through the type of data that businesses use to make decisions. This will foster more meaningful debate throughout the product development process and will further reveal the many types of value that design brings to a business.

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