Blinding Beauty: How Unexpected Product Attractiveness Can Overpower Negative Information

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When an attractive product is paired with poor functionality information, showing the product picture last (rather than first) creates a surprise response that overrides the impact of negative information on product quality perceptions. This is driven by consumers deriving superior quality inferences from product appearance when encountering the picture last.

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EXTENDED ABSTRACTS

“The A.I.R. Construct: The Processing Mechanism Underlying Aesthetics-Induced Consumer Behaviors”
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It has long been recognized that beauty can exert a strong motivational influence on people. In a consumption context, aesthetically appealing products have been linked to favorable attitudes and higher purchase intentions as well as willingness to pay price premiums of up to fifty percent of a product’s value. Yet after becoming the proud owner of a beautiful product—which often gets conspicuously displayed to the world—consumers sometimes become reluctant to actually use it for fear they might damage its pleasing visual appearance. What exactly could be driving these behaviors? Why do beautiful products motivate such responses in consumers?

A potential explanation suggested in the literature refers to the pleasure and positive mood elicited by beautiful objects, which may in turn explain the positive attitudes and behaviors triggered by attractive products. Yet mood alone may fail to account for why consumers place such a high value on aesthetics and why visual appeal sometimes has a downright anomalous impact on choice and usage behaviors. Currently there is an emerging view that consumers’ responses to aesthetics differ from the low-level affective reactions typically associated with hedonic product attributes, yet we not know exactly how. We propose that a mechanism more complex than mood may represent that powerful and unique driving force behind beautiful products. This mechanism—which we call A.I.R. (Aesthetics-Induced Responses)—implies that appealing products engage us on three dimensions: affective, cognitive, and conative.

On an affective dimension, appealing products touch our hearts. One look at a beautiful object, and, similarly to looking at an attractive person, we can experience something akin to love at first sight. We call this hot, emotion-laden response “spontaneous affect.” On a cognitive dimension, beautiful products hold the promise of making us more attractive and socially desirable through possession. This effect—which is comparable to the social premium bestowed on us by having a good-looking partner—will be called “self-enhancement.” Finally, on a conative (motivational) level, beautiful products elicit an immediate and powerful approach desire that manifests itself in a craving for sensory proximity. Not surprisingly, museums try to address this issue by asking viewers not to touch the displayed art. We call this motivational response “instantaneous approach.” Together, these three dimensions of A.I.R. are believed to explain the effects of aesthetics on consumers’ behaviors better than mood can.

We tested this assumption in an experiment in which we presented participants with the image and brief description of a highly attractive desktop computer. Participants then rated their mood, the A.I.R. measure, their behavioral intentions towards the computer, and their aesthetic impressions of the computer. The A.I.R. measure consisted of a 10-item scale which included the dimensions of spontaneous affect, instantaneous approach, and self-enhancement. Mood was measured using a validated scale that included both positively- and negatively-valenced items. We measured two types of behavioral intentions: those pertaining to simple consumption behaviors (such as buying a product) and those pertaining to more complex and difficult-to-enact behaviors (such as delaying a purchase until the desired product becomes available).

A structural equation analysis indicated that the proposed model—with aesthetic impressions as independent variable, behavioral intentions as dependent variable, and the three-dimensional A.I.R. concept as mediator—provided a very good fit to the data, both for simple and for complex behaviors. In both cases, the direct path from aesthetics to behavioral intentions was not significant, indicating full mediation through A.I.R. However, when mood was used as a mediator instead of A.I.R., this path remained significant in each case, suggesting only a partial mediation through mood. This indicates that A.I.R. can explain the relationship between aesthetics and several types of consumer behaviors better than mood can, and thus represents a superior mediator. Aesthetics create decidedly more than just a mood effect, and thus go beyond the simple pleasure response typically associated with “hedonic” product attributes.

Additionally, we collected measures of the computer’s perceived functionality, novelty/interestiness and status-signaling qualities and showed that, when these measures were entered into a model simultaneously with aesthetics and A.I.R., the path from aesthetics to A.I.R. remained significant, but none of the paths from the other measures to A.I.R. were significant. This indicates that the A.I.R. measure is directly driven by aesthetic impressions and is not a consequence of the functionality, novelty or status-signaling attributes of the attractive product.

Taken together, the present findings shed light on the powerful motivational force behind product aesthetics and allow us to better understand the unique processing mechanism through which aesthetics impact various consumer behaviors.

“The Beauty Penalty: Too Sexy for the Job?”
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Existing research has shown that physically attractive people benefit from various types of positive discrimination, from higher salaries, beneficial treatment in game shows, to more favorable offers in lab experiments. Explanations for this effect—called beauty premium—fall into two classes: taste-based explanations and statistical-based explanations. Taste-based explanations argue that beauty itself is valued by others but unrelated to productivity. Statistical-based explanations, in contrast, argue that beauty serves as a reliable indicator for productivity. For example, evolutionary accounts argue that both intelligence/fitness and beauty are inheritable characteristics. Since intelligent/fit men are more likely to mate with beautiful women, a positive correlation between beauty and productivity results. Recently, a third, belief-based explanation has been suggested, namely that beautiful people appear more confident, and since confident people are erroneously believed to be more productive, they are paid more.

We propose a slightly different belief-based explanation to account for the discrimination towards attractive people. Social psychology literature has shown that attractive people are not only perceived as more confident, they are also perceived as more sociable, dominant, and better adjusted than unattractive people. Given this validated positive link between beauty and perceived social skills, we conjecture that a beauty premium occurs for professions in...
which social skills are important, because people believe that beauty pays off in social interactions. In contrast, a beauty penalty occurs for professions that require analytical skills and extensive solitary training. This penalty effect is due to people believing that less attractive individuals incur higher costs in social interactions than attractive individuals, and are thus more likely than their attractive peers to engage in analytical activities and extensive training that do not require or may even inhibit social interactions. We test our explanation in three studies.

For Study 1 we selected 12 photos (3 of attractive and 3 of unattractive individuals of each gender) from a large set of working professionals. Respondents rated each photo along the dimensions of attractiveness, social and analytical skills. Consistent with our hypothesis, social and analytical skills were negatively correlated. Furthermore, individuals rated as more attractive were perceived to have better social skills but worse analytical skills.

Study 2 examined whether physical attractiveness would influence people’s preference for service providers. In a separate pretest, we found that for lawyers (doctors), people judge social (analytical) skills to be relatively more important for career success. Thus, we expected participants to prefer attractive lawyers to plain-looking lawyers, but to prefer plain-looking doctors to attractive doctors. Further, we manipulated skill importance. We expected that preferences for attractive lawyers and plain-looking doctors would be attenuated when social and analytical skills are not important. Participants were asked to imagine that they either had a medical condition or needed to go to court to appeal a property tax estimate. They were then provided with the CVs and headshots of two equally qualified doctors/lawyers (one was attractive and the other was plain-looking) and asked to indicate which professional they would choose. Additionally, we manipulated the importance of analytical and social skills to be either high (kidney surgery or an $8,000 tax appeal) or low (getting a drug prescription or a $500 tax appeal). In support of our hypothesis, choice proportions did not differ when social/analytical skills were not important, but differed significantly when social/analytical skills were important. We found a beauty premium for social skills, as a majority of subjects selected the more attractive professionals in the legal case, and found a beauty penalty for analytical skills as a minority selected the more attractive professionals in the medical case.

In Study 3, we manipulated the requirement of social versus analytical skills within the lawyer profession. The procedures were similar to what we used for the lawyer condition in study 2, except for having 9 photo pairs within each professional’s gender. Participants were told that they needed to hire a lawyer for a property tax reduction in the range of $6,000-9,000. Half of the participants were told that the lawyer needed to file a written appeal with the Board of Review (analytical skills condition), the other half was told that the lawyer needed to present their case in front of a jury (social skill condition). As hypothesized, we found a beauty premium for social tasks, as a majority of subjects in the jury-trial condition selected more attractive lawyers, but a beauty penalty for analytical tasks, as a minority did so for the paper-petition.

In conclusion, we demonstrate a beauty penalty effect, that is a negative discrimination against attractive service providers. Our results suggest that the beauty penalty might be as common as the beauty premium depending on whether social or analytical skills are required for the job. Further, our findings suggest that the beauty penalty versus premium cannot be explained by taste-based discrimination, as the same attractive persons are discriminated in favor of or against on tasks requiring different skills. Our results provide support for belief-based discrimination: People believe beauty pays off in social interactions, but hinders engagement and training in analytical tasks. Whether people’s beliefs that attractive people possess better social but worse analytical skills are indeed valid is an open question for future research.

“The Good, the Bad, and the Ugly: Aesthetic Effects in Product Feature Judgments”
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Prior research examining the influence of product design on evaluation has demonstrated a powerful effect of aesthetics on overall liking and judgments in the absence of other information, but the question of whether aesthetics can influence judgments of objective feature information is unresolved. We address whether and how aesthetics might alter performance evaluations of specific product features. Specifically, we examine how consumers make functionality judgments when aesthetic information conflicts with feature performance information. In taking this approach, we also address what appears to be an implicit assumption in research and practice: that being attractive is always better than being unattractive. If consumers generally expect more attractive designs to perform better, when faced with conflicting functional and aesthetic cues, how does this violation of expectation impact judgment? We examine how consumers judge relative feature performance of two competing brands when both options possess conflicting cues (i.e., one is superior to the other on a performance attribute but inferior in attractiveness).

Three outcomes are possible. Given that the task is evaluation of relative performance of a functional feature, the normative outcome would be no effect of aesthetics. A second possibility is that feature judgments will be biased in the direction of the inferior but more attractive product due to a positive halo. A final possibility is that feature judgments will be biased in the direction of the less attractive product, reflecting a negative aesthetic effect. Assuming consumers recognize the inconsistency between their expectations and the observed pattern, they will attempt to resolve it, and in so doing may elaborate on the conflicting feature. Elaboration can render beliefs about an object more evaluatively consistent and lead to a polarized assessment. We test these possibilities in four studies.

Study 1. Participants were presented with fictitious Consumer Reports reviews for two brands, which were written so that one target feature was clearly superior to the other. We then manipulated whether these reviews were accompanied by pictures of the product designs. Half the participants saw only the two reviews; the other half saw the reviews accompanied by pictures of the product designs (presented side-by-side). One design was more attractive than the other. The more attractive design was paired with the review of the inferior feature, and the less attractive design was paired with the review of the superior feature. In addition we manipulated cognitive load by having participants memorize either a 2-digit or 11-digit number. The study conformed to a 2 (visual information: present vs. absent) x 2 (cognitive load: high vs. low) x 2 (product replicate: cookware vs. speakers) design. The key dependent measure was participants’ judgment of which brand’s target feature was superior. A rating of zero would indicate they thought the two brands were equal on the target feature. A positive rating would indicate they perceived the brand with the objectively superior feature (the unattractive design) to indeed be superior on the target feature. A negative rating would indicate they perceived the brand with the objectively inferior feature (the more attractive design) to be superior.

Analysis of relative judgments of the superiority of the target feature revealed a significant visual information X cognitive load
interaction. Consistent with the negative aesthetic effect, we found that in the absence of cognitive constraints, participants seeing the pictures perceived the unattractive brand as even better on the target feature than did participants not exposed to pictures. This effect occurred only when participants had the cognitive capacity to consider the information. For participants who saw reviews and pictures, the addition of cognitive constraints moved the relative feature judgments in the direction of the more attractive design (inferior feature).

Study 2. In study 2 we manipulated the pairing of the visual and written information so that half the participants were presented with incongruent visual and written information (i.e., attractive design paired with superior target feature, and less attractive design paired with inferior target feature). We also manipulated cognitive load. If consumers believe that attractive products perform better, evaluating a product where design and functionality conform to expectations (i.e., are congruent) should make processing easier, so people in the congruent conditions should not be affected by cognitive load. The procedure followed that of study 1.

Results indicated that when the picture and target feature were congruent, participants strongly favored the superior feature, regardless of cognitive load. However, when the picture and target feature were incongruent, participants favored the functionally superior (but aesthetically inferior) brand only when under low cognitive load. Moreover, when under low load, participants took more time to make their judgments when faced with incongruent rather than congruent information, supporting the inconsistency reconciliation explanation.

Study 3. In study 3 we investigated order as a potential boundary condition. Using the same incongruent pairings of design and reviews, we manipulated whether participants saw the visual and verbal information simultaneously or saw the pictures prior to reading the reviews. We found that when participants saw the designs of the competing brands prior to reading the reviews about them, the advantage for the unattractive product disappeared.

“Blinding Beauty: How Unexpected Product Attractiveness Can Overpower Negative Information”
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Visual attractiveness can distort quality perceptions by making products appear significantly higher in quality than they actually are. What happens, however, if an attractive product is accompanied by less-than-stellar functionality information? Can beauty overpower such information, and if yes, when and through what psychological mechanism? The present study aims to answer these questions.

Building upon order effects theory, one can expect that, when an attractive product is paired with negative performance information—a violation of consumers’ expectations— attractiveness may attenuate the negative impact of this information depending on whether the product’s appearance is encountered before or after the functional information.

Recent research has indeed shown that, when the attractive product picture is presented first, it elicits an affect-based impression that can positively bias the subsequent processing of verbal information. This results in higher product quality evaluations than if the picture and functionality information were presented side-by-side. In real life, however, consumers sometimes receive information in the opposite order, meaning that they hear or read negative performance information about a product before actually experiencing its attractive design. When one is then exposed to the appealing product, contrast theory predicts that the discrepancy between the low expectations induced by the negative information and the pleasantly surprising sight of the attractive design can magnify the positive impact of attractiveness on product evaluations. Thus, one can also expect consumers to form enhanced product quality evaluations when encountering the product picture last rather than simultaneously with functionality information. This order effect has not yet been examined.

To test whether product attractiveness will have a stronger positive impact when encountered first or last, we conducted a 2 (order: picture-first versus picture-last) x 2 (product performance: superior versus inferior) between-subjects study. Participants were presented with the picture of an attractive computer and fictitious consumer reviews depicting the computer as either superior (4.8 out of 5 stars) or inferior (2 stars) in performance. Half of the participants saw the computer image before the reviews, while the remaining participants saw the two in the opposite order. To ensure that the information was processed in the required order and to prevent recency effects, we asked participants to elaborate in writing on the first piece of information.

The results revealed an interaction between performance and order, such that, when the picture was presented first, product quality evaluations differed significantly between the superior- and inferior-performance conditions. However, when the picture was presented last, despite the rather large objective difference in product performance between the two conditions, consumers perceived the product to be just as high in quality in the inferior-performance condition as in the superior-performance condition. This suggests that, as predicted by contrast theory, when an attractive product is presented last, attractiveness can override negative performance information by positively distorting product quality evaluations. We call this the “blinding beauty” effect. In Study 2 we confirmed that this effect happens only for attractive and not unattractive products.

Study 3 aimed to confirm that the effect is indeed motivated by surprise and to elucidate the mechanism through which the effect occurs. Since consumers make quality judgments by combining both verbal and visual product information, their higher quality evaluations in the picture-last condition could have been formed through one of two possible processing mechanisms. First, given that the pleasantly surprising sight of an attractive product elicits positive affect, consumers could have distorted or even discounted the functional information encountered beforehand, which represents an affect-confirmation process. Alternatively, consistent with the inference-based view that people use visual design cues to form beliefs about unobservable product attributes, consumers could have drawn on the image to generate positive inferences about the product’s quality, which often happens in the case of attractive products. This process should be intensified by attractiveness coming as a surprise, given that surprise-inducing stimuli enhance attention and elaboration. One would therefore expect an attractive product to trigger particularly favorable appearance-based quality inferences in the picture-last condition. By contrast, in the picture-first condition, the reduced surprise effect of attractiveness paired with the subsequent encounter of negative information may attenuate these positive inferences, resulting in lower picture-based product quality evaluations.

To verify the exact cause as well as the mechanism behind the blinding beauty effect, Study 3 employed a design similar to Study 1, and included several process measures. The results showed that the surprise induced by the attractive product image was indeed higher for picture-last than for picture-first participants. Visual recall measures further corroborated these findings by revealing...
that picture-last participants paid significantly more attention to the image than did picture-first participants, even though attractiveness perceptions—an alternative attention-enhancing variable—were identical between conditions.

When it comes to the processing mechanism associated with the surprise response, the product quality evaluations derived from the reviews as well as the reviews’ credibility did not differ between the picture-first and picture-last condition, which argues against a mood-consistent distortion or discounting of the negative verbal information. In contrast, the quality perceptions inferred from the picture showed the same pattern as the surprise ratings, meaning that picture-last participants perceived the image as conveying higher product quality than did picture-first participants. Notably, since attractiveness ratings did not differ between conditions, a “beautiful-is-good” effect can be ruled out. Additionally, the quality inferred from the product image fully mediated the relationship between presentation order and overall quality evaluations, while verbal information-based quality perceptions did not.

Together, these findings suggest that when an attractive product is paired with inferior functionality information, showing the product picture last creates a strong surprise response that draws attention to the product appearance and can override the damaging impact of the functionality information. This “blinding beauty” effect can be best explained by consumers deriving superior product quality inferences from the attractive product design when encountering its picture last.