

Tripsaver Website Useability Assessment

Aesthetic-Useability Effect

David Provost

Introduction

The idea that we prefer using things that are beautiful, even when that beauty masks a decreased useability is an easy one to understand. Whether it is a car, a phone, or a can opener, we can all think of examples where we might choose a more pleasant-looking object over a utilitarian one. Even the word utilitarian betrays this effect. The literal sense of the word speaks strictly to something's suitability for use, but it has connotations of simple, unsophisticated design. The Aesthetic-Useability Effect is a way to codify this preference and an attempt to understand both the benefits of good design and the hazards of allowing that good design to obscure an objective examination of usability.

Literature Review

The effect was first described in 1995 by Masaaki Kurosu and Kaori Kashimura in their study of ATM interface design. They presented a series of similar designs to users and had them rate each interface along the axes of beauty and usability. The range of responses demonstrated that a link between the two independent characteristics. "Relatively high correlation (0.589) was obtained between these two scales which suggests that the apparent usability is somewhat related to the aesthetic aspect of the layout pattern." (Kurosu & Kashimura, 1995) Further studies attempted to statistically define the effect, such as Tractinsky, Katz and Ikar (2000). They used a multivariate analysis of covariance to demonstrate a similar correlation between beauty and usability. They also compared that result to other studies of aesthetics and social perception, suggesting that the Aesthetic-Useability Effect is a part of the larger inherent human preference for beauty.

To further refine the understanding of the effect, Monk and Lelos (2007) used a simple domestic object, rather than an electronic interface, and strictly limited the alterations to completely aesthetic changes, by asking users to compare can openers with different colored handles. Their results were less conclusive than previous investigations, but still indicated at least

the possibility that the most simple aesthetic changes can have an impact on perceived usability. Further studies investigated not only the perceived impact of good aesthetic design, but also its actual impact on useability. Users completed specific tasks faster and with fewer errors on a simulated cell phone interface that they rated as aesthetically superior, when compared to subjects that used an unattractive interface. (Sonderegger & Sauer, 2010)

More recent studies have produced results that complicate the established narrative about the Aesthetic-Useability Effect. A quantitative analysis of previous studies notes that correlation does not equal causation, and that the direction of the effect could be reversed without invalidating any of the existing literature. Perhaps it is the case that increased usability leads to better aesthetic assessments (Hassenzahl & Monk, 2010). Hassenzahl and Monk also develop the possibility that both aesthetic and useability ratings may be influenced by a product's overall effect on the subject (its "goodness"). Additionally, early studies failed to take into account that cultural differences might have on users' assessments of both aesthetics and useability, with a clear preference for interfaces that align with their cultural expectations (Reinecke & Bernstein, 2011). Finally, Grishin and Gillan (2019) used an experimental design that varied usability and aesthetics as separate variables in order to demonstrate causality in the Aesthetic-Useability Effect, but they were unable to demonstrate any correlation between aesthetics and useability at all. Further study is needed, especially more rigorous, statistically significant research.

Assessment

The NC State University Libraries have over 5 million volumes and over 128,000 serial subscriptions (NC State University, n.d.-a). To supplement these holdings, the Libraries offer interlibrary loan and document delivery services to their patrons. The Libraries also allows patrons to place holds on books located at any campus branch and have them delivered to the most convenient branch. The Libraries brand these services as Tripsaver - a unified way to easily request and quickly receive materials.

There are a number of different services wrapped into the Tripsaver brand: interlibrary loan of books or other physical media; document delivery of scanned articles or chapters from other libraries or from the Libraries' collection; and delivery of physical materials from one branch to

another. While these services look very different to the library professionals behind the scenes, it makes a great deal of sense to group them together for the patron. The Libraries accomplishes this by unifying all of these requests on a single Tripsaver page. Patrons can place requests from elsewhere in the website and catalog, but the Tripsaver page is where patrons are directed if their request does not come from a specific catalog entry or article search result.

It is clear that the Libraries are counting on the Aesthetic-Usability Effect when it comes to the design of the Tripsaver page. The page is simple and uncluttered, with the bare minimum of text needed to orient the user. The users attention is drawn quickly to four large blocks of color that extend down beyond the bottom of the page, representing the three major request categories—Article, Book, and Book Chapter, along with Other. The colors are taken from the university brand guidelines (NC State University, n.d. -b), carefully chosen to ensure consistency across the website, for maximum aesthetic appeal. Functionally, they serve as buttons, linking to blank forms for requesting specific items, as well as providing a visual cue that there is additional content “below the fold”.

Scrolling down reveals a button that allows users to sign into their Libraries account and access electronic requests or check on the status of physical requests. Below that are two sections—Services for NC State Users and Services for Other Users—that hide detailed information about Tripsaver services behind dropdown menus. Contact information and staff photos are below the menus.

The carefully constructed aesthetics of the upper section of the Tripsaver page are not carried through to the lower section. The red of the button and the red of the dropdown menus do not match. Though both shades of red are included in the university brand guidelines, the slightly different colors are jarring in close juxtaposition, and the smaller button has rounded corners, unlike the other elements on the page. In addition, the disparate widths of each section of the page detract from the unified, simple aesthetic.

Recommendations

The NC State University Libraries website has a clear and consistent aesthetic that supports a transparent and clear usability, and—assuming the Aesthetic-Usability Effect is real—it

should increase users' satisfaction and assessment overall. On the Tripsaver landing page, some slight adjustments to the design will only serve to augment that effect. First, adjust the color, the shape, and the size of the "Log in to My Account" button to better match the other elements on the page. The width of the dropdown menus should also be adjusted to align with the prominent buttons near the top of the page.

References

- Grishin, J., & Gillan, D. J. (2019). *Exploring the Boundary Conditions of the Effect of Aesthetics on Perceived Usability*. 14(2), 29.
- Hassenzahl, M., & Monk, A. (2010). The Inference of Perceived Usability From Beauty. *Human-Computer Interaction*, 25(3), 235–260.
<https://doi.org/10.1080/07370024.2010.500139>
- Kurosu, M., & Kashimura, K. (1995). Apparent Usability vs. Inherent Usability: Experimental Analysis on the Determinants of the Apparent Usability. *Conference Companion on Human Factors in Computing Systems*, 292–293. <https://doi.org/10.1145/223355.223680>
- Monk, A., & Lelos, K. (2007). Changing only the aesthetic features of a product can affect its apparent usability. In *Home Informatics and Telematics: ICT for The Next Billion* (Vol. 241, pp. 221–233). https://doi.org/10.1007/978-0-387-73697-6_17
- NC State University. (n.d.-a). Collections. Retrieved November 18, 2019, from NC State University Libraries website: <https://www.lib.ncsu.edu/taxonomy/term/1994>
- NC State University. (n.d.-b). NC State Brand. Retrieved November 19, 2019, from NC State University website: <https://brand.ncsu.edu/#>
- Reinecke, K., & Bernstein, A. (2011). Improving Performance, Perceived Usability, and Aesthetics with Culturally Adaptive User Interfaces. *ACM Trans. Comput.-Hum. Interact.*, 18(2), 8:1–8:29. <https://doi.org/10.1145/1970378.1970382>
- Sonderegger, A., & Sauer, J. (2010). The influence of design aesthetics in usability testing: Effects on user performance and perceived usability. *Applied Ergonomics*, 41(3), 403–410.
- Tractinsky, N., Katz, A. S., & Ikar, D. (2000). What is beautiful is usable. *Interacting with Computers*, 13(2), 127–145. [https://doi.org/10.1016/S0953-5438\(00\)00031-X](https://doi.org/10.1016/S0953-5438(00)00031-X)