The Importance of Visual Hierarchy in Effective Call to Actions

INTERFACE DESIGN
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Interface Design - Research Paper (Very Rough Draft)

*Notes:* How has this research helped me to create/tackle this design project? How can the process of iteration help to create/influence the ties between Visual Hierarchy and Call-to-Actions?

**Abstract:**

Throughout the history of interface design there has been many changes in how they were constructed and why they choices concerning: color, sizing, positioning, typography and a multitude of other design elements. However, the there is also a change in the way users pick out data/useful information on a website or application. Users now have less time to read through heavy text areas, users now will stop using or leave a website or application if they are unable to find information to complete their task.

The shift in both the use of visual hierarchy and users immediate need for pertinent information has changed the way web designers and application developers structure the content on their website/web application. Currently, the use of the color, size, positioning, typography and other design elements are tailored towards the psychology of the users.

For this project I will be looking at creating an efficient and effect use of color, size and position in order to gain the information necessary to complete their intended task. Both Apple Inc. and Google LLC have design systems aimed to provide their respective users with an effective user experience. In the interest of the having a cohesive research project, I will be only concerned the design elements mentioned above and the design systems of Apple Inc. and Google LLC.

Through the utilization of both research and user testing, this project dealt great results. The data gather by the research allowed for greater understanding of the importance of the visual hierarchy in CTA’s, especially coupled with the feedback from users. Although each design element by itself may seem like a non-important part of the

**Background:**

Many application developers and web designers have knowledge of both visual hierarchy and the importance of a call to actions. However, the use, or the effective use of the combination of both visual hierarchy and CTAs have not always been the priority of web designers and application developers. In the beginning of the web, many programmer and designers were not worried about the use of visual hierarchy and its combination with CTA’s, or at least the purposeful use of the two.

This use of visual hierarchy has increased since the start of the web. The dark ages of the web was made up of a lack of visual appealing websites, text was very abundant and vital information on websites was hard to find. The lack a visual hierarchy was apparent, however as the web/internet progressed inventions/technology was created that helped to declutter websites and alleviate user confusion and stress.

In 1995, tables and JavaScript was introduced and helped to create allowed for websites to appear on computer screen with more structure then before. Then in 1996 Flash was added into the domain of web design and allowed users to create all kinds of splash pages, intro animation and other interactive effects. Then CSS in the 1998, created another wave of freedom in the web design world. This allowed for the separation of content from its presentation. Allowing designers to create more distinct and user friendly website and application. 2007 makes the arrival of Mobile, Grids and frameworks some of the
most notable the technologies that allowed designers to create user centered designs that allowed for ease of use and less confusion of direction and better flow. Despite the advances of how easy and fast it is to create human centered interfaces there are still some noteworthy organizations still don’t adhere to these standards, such as all most any government agency. This is due to the fact that they do not have much if any competition, for whatever reason you are on their website you have to be there and have to complete the given task regardless of how hard and time consuming it is to complete it.

**Literature Review:**

The literature referenced mentioned in this paper was included based on its informational significance. Each paper provides important information based on the topic. Some materials offer background information on the topic (either on hierarchy or CTAs), while some provide more detailed analysis and understanding. There is also information on Apple’s Human Centered Interface guidelines which are used in the creation of the application/web design associated with this paper.

The use of color plays an important role in allowing the user to visually decide rather an element on screen is more important than another. However, it is only one factor in deciding what a user of an interface deems as relevant. According to the article, *User Interface Design Issues for Easy and Efficient Human Interaction: An Explanatory Approach*, “A visual hierarchy results from varying such things as alignment, proximity, color, tone, indentation, font size, element size, padding, spacing, etc. When these visual language elements come are applied correctly, they can work together to direct and pause people’s attention within a page... (Debasmita Saha et al, 30-31)” This is profound for many reasons, primarily because it details how intricate and diverse the creation of an effective visual hierarchy is. They also detail ways to create an effective visual hierarchy: Recognize, instead of Recall, Law of Default, Provision of Reconfirmation and Undo, Follow Convention and Flexible Mode of Interaction. They also have a section titled Performance Issues in User Interface Design, which aims to decrease load times by minimizing the use of controls such as buttons, dialog boxes, menus, etc, Not using unnecessary images and using small sized images, not using to slow animations, and by designing according to available hardware support (Debasmita Saha et al, 33-34).

The online article *9 Effective Tips on Visual Hierarchy* by Alina Arhipova, states that in order to create an effective visual hierarchy you have to keep your business goals on mind, consider scanning patterns, keep functionality first, view white space as a visual element, apply the golden ratio, use a grid, add color, pay attention to your font use (utilize three levels of fonts on the web but two for mobile). Keeping your business goals in mind allows the creator of the interface design to prioritize and emphasize UI elements, leading to effectively prioritize visual content and allow for a product to stand out from the crowd. Knowledge of scanning patterns is important for users to see what see whether they are interested in the content. The two main scanning patterns are “F” and “Z” shaped. The utilization of both are quite different, the former is used for text heavy/dense digital format, while the latter is used for not so heavy text dense content or if the digital medium doesn’t require you to scroll down. The aesthetics of the interface should not interfere with creation of fluid site navigation and an overall clear product. The use of white space also know as negative spaces helps allow other UI elements to be noticed. It can also help users to see what UI elements are similar or to detail their connection to one another. The golden ratio is a mathematical term but is not just useful in math, it allows for the human eye to flow through an interface and information on screen. Color helps the user of the interface to discern core element for other non-essential elements.
“However, the hierarchical nature of architectural patterns can also be interpreted as a hierarchy of problems. The highest level problems are broken up in smaller problems for which solutions appear to exist. They just happen to map directly to a geometrical metaphor in architecture, working from large areas to small areas. The important thing to understand is that such a problem-hierarchy approach can be applied to other domains as well.” - Martijn van Welie, Gerrit C. van der Veer from *Pattern languages in interaction design: Structure and organization*.

“From the basic posture and from user research, designers will have to determine what are the main user goals and tasks that need to be supported and to what extent. We will call this the ‘experience’. The user experience is not just about tasks and goals but also about how the users reach their goals using a site concept, how they perceive the site and whether it gives them the appropriate satisfaction.” - Martijn van Welie, Gerrit C. van der Veer from *Pattern languages in interaction design: Structure and organization*.

**Conclusion:**

In conducting research, going through different stages of design and obtaining valuable user feedback has allowed me to learn about how visual hierarchy is an important part in creation of CTAs and allowing for an effective and efficient CTA that allows users to complete their desired task. The connection between visual hierarchy and CTAs is that through purposeful and meaningful use of color, size, spacing, positioning, mapping and consistency. A few other aspects to keep in mind is affordance, user flow and the use of short and imperative text helps to further reinforce user’s ability to quickly and efficiently complete their intended task.

I found the fact that the shift in how users looks for information has changed over the years is an important event in the effectiveness of CTAs.

From going through one stage of usability testing I have learned that the design I want to implement was good but I had to correct a few small details within the interface design such as better color contrast, showing the how each screen connect the other.

**Summary:**

The implementation of proper and efficient CTAs that provide users with an easy way to complete task is influenced heavily by the visual hierarchy. The creation and implantation of CTAs have made a lot of progress since the beginning of the internet, basic hyperlinks and buttons that were hard to distinguish from other elements on the web and lack of compelling text. However, bad examples of CTA’s still exist on the web, although mostly implemented on government website, they also can be found utilized of small unknown websites and applications. With the shift to human-computer interaction the important of having a CTA that correctly applies the design elements of visual design are extremely useful in user conversions, marketing, improving users’ sense of direct via the website/application and user stop decision fatigue and confusion. From this project I would have wished to be have had the time to complete an actual website/application to obtain a better understanding of all the benefits of applying the design elements that create a good visual design. I wish I had the time to create a functioning app
be, in doing so, they research project would have been a better project and those going through usability testing would have given better constructive criticisms.
References:

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