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**comp4280f2020 - bibliography summaries**

**Minimalism**

1. *Minimalism in Art and Design: Concept, influences, implications and perspectives*, Cedric VanEenoo, University of Technology Sydney, Australia, <https://academicjournals.org/journal/JFSA/article-full-text-pdf/3A668BC6040>

Minimalism can be described as the principle of “stripping away” elements from a system or design so the final product only contains absolutely essential elements. By “reducing excessive complexity” in a design, usability and understanding is increased for the user. This is important for the usability of a UI.

1. *TOWARDS A DEFINITION OF MINIMALISM: PRINCIPLES OF MINIMAL VISUAL DESIGN IN WEB INTERFACES*, Katherine L. Meyer, University of North Carolina at Chapel Hill, https://cdr.lib.unc.edu/concern/masters\_papers/5d86p3983

The objective of minimalism in website design is to provide an intuitive UI. By using simple and clean elements, a UI can be relatively easier to learn. By also removing unnecessary elements, it improves the UI by “by providing as little distraction from the content as possible*”.*

1. *Principles Of Minimalist Web Design*, Cameron Chapman, <https://www.smashingmagazine.com/2010/05/principles-of-minimalist-web-design-with-examples/>

In Minimalism, “Less is more”. By having less elements of a page, the user is allowed to focus more on the essentials of the UI. The usage of minimal, carefully designed elements in a layout improves user “readability or usability”.

1. *A Study of Minimalist Principles for Designing Entrepreneurs' Website,*

Zuriana Abu Bakar, Siti Zubaidah Mohd Zain, Maizura Mohd Noor, Association for Computing Machinery, <https://dl.acm.org/doi/abs/10.1145/3077584.3077609>

In Minimalism, it is important to use “fewer elements in delivering information”. When minimalistic principles are followed in website design, it has been shown to increase the usability and appeal of the site. Various models and principles have been researched and formed in the study of minimalism such as color scheme usage and symbology.

1. *Minimalistic Design With Large Impact: Functional Minimalism For Web Design*, Nick Babich, <https://www.smashingmagazine.com/2017/10/functional-minimal-web-design/>

Minimalistic principles can provide “the most usable and attractive websites possible”. By using these principles, designers and developers can increase the effectiveness of the designs/websites. The effectiveness is increased by reducing the learning-curve of the website and allowing the design or website to easily communicate its purpose/functionality by its choice of elements.

1. *The Roots of Minimalism in Web Design,* Kate Moran, Nielsen Norman Group, <https://www.nngroup.com/articles/roots-minimalism-web-design/>

The principles of Minimalism seen in modern designs and websites stems from “earlier movements in the fields of fine art and human–computer interaction*”.* The use of minimalism prevents the user from being overwhelmed with information thus improving the user experience and intuitive nature of the design. These principles allow the user to avoid accessibility obstacles and it provides more “aesthetically-pleasing interfaces*”*.

1. *Why Simple Website Designs Are Scientifically Better*, Tommy Walker, CXL , <https://cxl.com/blog/why-simple-websites-are-scientifically-better/>

A Minimalistic design can provide a more universal level of understanding for a wide demographic of users. This works by reducing visual complexity and context-necessity in a design or UI which can allow users to use the UI with ease, even if it is their first time. Simpler and cleaner designs with a strategic layout and use of design elements “don’t require our eyes and brain to work as hard to decode, store, and process information”.

1. *The Role of Aesthetics in Web Design,* LISBETH THORLACIUS, Roskilde University, <https://www.researchgate.net/publication/238106570_The_Role_of_Aesthetics_in_Web_Design>

Minimalistic layouts and Visual symbols are important in society and daily living because it allows for quicker understanding of the purpose or context of the design or application that it is used in. It can communicate the functionality or purpose of a design/application to a target audience with minimal use of graphics. It can also convey the genre or category a design/application belongs to.

1. *ART TERM: MINIMALISM,* Tate, <https://www.tate.org.uk/art/art-terms/m/minimalism#:~:text=Minimalism%20emerged%20in%20the%20late,art%20of%20the%20previous%20generation>.

Minimalism originated in the late 1950’s as artists began to transition into the more abstract and conceptual art style. Minimalism was praised for its simplicity yet “highly purified form of beauty” that anyone could enjoy. A wider audience found appeal in this style because the aesthetic wasn’t overwhelming and required less context or art knowledge for a general consumer to have in order to comprehend the piece.

**Iconography**

1. *Effects of Users’ Familiarity With the Objects Depicted in Icons on the Cognitive Performance of Icon Identification*, Zhangfan Shen, Chengqi Xue, and Haiyan Wang, <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6024531/>

Studies were done to test the effectiveness of icons on cognitive performance. The icons used contained images and symbols that were common and familiar to the average individual. For “time critical user interfaces”, icons should maintain a simplistic design to reduce the cognitive load for comprehension of the meaning of the icon.

1. *Tip of the Icon: Examining Socially Symbolic Indexical Signage*, Azusa Pacific University, SAERI CHO DOBSON, <https://quod.lib.umich.edu/d/dialectic/14932326.0001.106/--tip-of-the-icon-examining-socially-symbolic-indexical?rgn=main;view=fulltext>

Iconography can be considered a universal language amongst us humans. The visual representations exceed the limitations of language and typography. Unfortunately, certain icons/images can be misinterpreted with the lack of typography, and, in doing so, can cause offence in the realm of social design ethics.

1. *Marks, Icons & Symbols in Graphic Design: Application & Examples*, David Juliao, <https://study.com/academy/lesson/marks-icons-symbols-in-graphic-design-application-examples.html>

The use of simple shapes can form a basic graphic that can represent an object or concept in reality. These basic graphics (icons) are often memorable and can convey a clear “transmit a clear message and a memorable image*”*. A well designed icon contains minimal, yet strictly enough, detail to properly represent the object or concept it was purposed for.

1. *Iconography and Iconology as a Visual Method and Approach*, Marion G. Müller, <https://methods.sagepub.com/book/sage-hdbk-visual-research-methods/n15.xml>

Iconography originated in the 16th century to “categorize the particular visual motifs of paintings”. It was a basic symbol or image that would convey a meaning or concept. We have implemented and evolved this 16th century art style into a common use tool in modern society’s infrastructure.

1. *The Iconography of Universities as Institutional Narratives*, Gili S. Drori, The International Journal of HigherEducation Research, <https://www.researchgate.net/publication/277279625_The_Iconography_of_Universities_as_Institutional_Narratives>

Universities have adapted to the icon-based, modern, branding practices. Universities perform a self-analysis to determine the concepts and objects that most appropriately represent their identity. They then undergo research to make educated choices as to how to convey their identifying attributes through an icon.

1. *Foundations of iconography: Definition, purpose, and benefits*, Helena Zhang, <https://uxdesign.cc/foundations-of-iconography-f95d7233a3e6>

Icons utilize visualizations to communicate information at a high speed, avoiding the limitations of reading text. The icons use “visual metaphors to speed comprehension, by transferring properties from something we already understand*”*. In websites, icons can improve the navigation experience and add an intuitive element to the UI through improved speed of understanding.

1. *Usability Testing of Icons*, Aurora Harley, Nielsen Norman Group, <https://www.nngroup.com/articles/icon-testing/>

To ensure icons and UI layout are effective and not misleading or misunderstood, they must be thoroughly tested. They must follow the principles of findability, recognition, responsiveness, and attractiveness. These principles involve a user being able to locate elements easily on a page, recognize the concepts communicated through the element’s design, intuitively recognize the functionality of an element based off its icon, and the user must be attracted to the design style of the website to ensure a positive user experience.

1. *How to Conduct Icon Usability Testing (and Do Icons Even Improve Usability?)*, CXL, Shanelle Mullin, <https://cxl.com/blog/icon-usability-testing/>

Usability testing is essential in the implementation of iconography in a UI. We must ensure that the icons are appropriately designed to enhance the user experience by speeding up user comprehension of the UI. The benefits include a fast learning curve, improved collaboration within an app or interface, faster productivity, improved decision making in UI interactions.

**Decoration/Animation**

1. *The Role of Animation and Motion in UX*, Page Laubheimer, Neilson Norman Group, <https://www.nngroup.com/articles/animation-purpose-ux/#:~:text=Summary%3A%20Animation%20in%20UX%20must,metaphors%2C%20and%20to%20enhance%20signifiers.&text=Share%20this%20article%3A&text=Motion%20is%20most%20often%20appropriate,induce%20delight%20or%20entertain%20users>.

Animation implemented in UI can enhance the user experience and boost comprehension of the functionality. It “must be unobtrusive, brief, and subtle”. It can also add to the visual appeal of the UI thus improving the user experience.

1. *The ultimate guide to proper use of animation in UX*, Taras Skytskyi, <https://uxdesign.cc/the-ultimate-guide-to-proper-use-of-animation-in-ux-10bd98614fa9>

The motion and design of an animation can add to the comprehension of the corresponding element’s functionality. The key to animation motion in UX is the speed at which it moves because we do not want to go too slow and delay the user, but we don’t want it to be too fast and possibly result in the user not noticing it. In addition, we want to ensure the animation is “unobtrusive and does not distract the users from their goals*”*.

1. Including Animation In Your Design System, Val Head, <https://www.smashingmagazine.com/2019/02/animation-design-system/#:~:text=Animation%20is%20an%20important%20design,UI%20design%20tooling%20unaccounted%20for>.

Animation can add to the branding of a UX. The motions and actions of UX elements can “say something about your product and its personality”. The animation works along with the color, icons, and fonts you use to create a complete and attractive UX.

1. Effectiveness of use of Animation in Advertising: A Literature Review, D. Goel, R. Upadhyay, University of Delhi, <https://www.ijsrnsc.org/pub_paper/IJSRNSC/26-IJSRNSC-0228.pdf>

Animation can add to the attractiveness of data visualizations, brand designs, and marketing advertisements. The general population has an appeal to animations and cartoon characters because, in graphic art, there is more abstraction, expression, color, and creativity conveyed in comparison to a photo-realistic graphic.