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The impact of the model's gaze direction on the user experience

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Introduction

Eye gaze direction is a crucial element in face processing and social communication, influencing how efficiently facial expressions of emotion are perceived and processed (Hu et al., 2017; Adams Jr & Kleck, 2003). Research has shown that direct eye gaze captures and retains attention to faces, suggesting its significance in human interaction and visual processing (Bindemann et al., 2005). Eye contact is crucial for establishing and maintaining interpersonal relationships, as it conveys attention and intent, and can influence emotional states such as trust and anxiety. (Cañigueral & Hamilton, 2019; Davidhizar, 1992) Even in images with human faces research on eye gaze has indicated that, observers typically direct their attention quickly to the facial areas. (Cerf et al, 2009)In the context of advertising, studies have demonstrated that a model's gaze direction can significantly impact viewer attention and engagement. Hutton and Nolte investigated that participants looked longer at product in advertisements when the model's gaze was directed toward the product. (Hutton & Nolte, 2011) This finding is particularly important in the digital advertising, where online users are more oriented on goals and critical of ads compared to print media (Deshwal, 2016), highlighting the potential impact of subtle design factors like gaze direction on advertising effectiveness.



Figure 1, 2, 3

Heat maps displaying gaze intensity during the 2nd second of observation for models facing right, left, and front.



Online shopping has become extremely popular in recent years, and there are various reasons why people prefer to shop online. Some of these reasons include: convenience, the ability to compare competitors and speed. (Kavitha, 2017) Online shopping requires efficiency and respondents should enjoy the purchasing experience. (y Monsuwé, 2004)

User Experience (UX) refers to the various perceptions that arise from using a specific product or system. This encompasses all physical and psychological reactions, as well as emotions that occur during and/or after its use. The experience results from the presentation of information, functionality, and performance provided by the system. (Mirnig et al., 2015) A good interface is one that allows the user to focus on the information and their goals, rather than on how the interaction is executed. (Galitz, 2007)

Methods



The aim of this research is to examine whether the

Figures 4, 5, 6

Heat maps displaying gaze intensity for overall results of models facing right, left, and front.

pants. Measurements were conducted using the Gazepoint GP3 Desktop eye-tracking device, with data processed by the Gazepoint Analysis 3.5.0 software. The eye-tracking device was recalibrated for each participant. Participants faced the screen directly, maintaining a distance of 60 to 80 cm from it. Each participant viewed three examples of a web store sequentially, with each example displayed for 10 seconds. The analysis of the research results was performed using heat maps.

Results

From the three displayed images (Figure 1, Figure 2, Figure 3), it can be seen that the gaze of the model in the photograph significantly influenced the respondents' attention within the 2nd second of viewing.

Figure 2 shows the left-facing model and if compared with Figure 1 there is a visible difference. In this example (Figure 2) direction of gaze is mostly focused on face of the model, title of product and a little bit on the smaller images.

In Figure 3, it is evident that the respondent's attention was mostly focused on the model's face. However, they also looked with great interest at the first item in the small picture gallery, namely the necklace. From Figure 4, Figure 5, Figure 6, it can be concluded that the gaze of the model in the image significantly influences the respondent. If the model is looking straight ahead, the respondent's attention is scattered across the entire interface of the online store. However, if it is necessary for respondents to focus on a specific part of the online store, this is achieved by directing the model's gaze directly at that point. focus their attention on the model, the model's gaze should be directed straight at the user. However, if a specific part needs to be highlighted, the model's gaze should be directed towards that point. This way, users will pay more attention to the desired area. A direct gaze and a gaze directed outside the frame can be beneficial if the aim is for respondents to view all interface elements evenly. Through this method, designers can influence users and guide them to notice specific areas of the design.

REFERENCES

- Adams Jr, R. B., & Kleck, R. E. (2003). Perceived gaze direction and the processing of facial displays of emotion. Psychological science, 14(6), 644-647.
- Bindemann, M., Burton, A. M., Hooge, I. T., Jenkins, R., & De Haan, E. H. (2005). Faces retain attention. Psychonomic bulletin & review, 12, 1048-1053.
- Cañigueral, R., & Hamilton, A. F. D. C. (2019). The role of eye gaze during natural social interactions in typical and autistic people. Frontiers in psychology, 10, 560.
- Cerf, M., Frady, E. P., & Koch, C. (2009). Faces and text attract gaze independent of the task: Experimental data and computer model. Journal of vision, 9(12), 10-10.
- Davidhizar, R. (1992). Interpersonal communication: a review of eye contact. Infection Control & Hospital Epidemiology, 13(4), 222-225.
- Deshwal, P. (2016). Online advertising and its impact on consumer behavior. International Journal of Applied Research, 2(2), 200-204.
- Galitz, Wilbert O. The essential guide to user interface design: an introduction to GUI design principles and techniques. John Wiley and Sons, 2007.

gaze or direction of the model's look in a photograph affects the user's experience. For the purposes of the research, three examples of an online jewellery store were created. The photographs used for conducting the research are original, as are all the text and logo used in the research example.

Model in the photograph is directed to a different side in each example (right, left, straight). The assumption is that the gaze of the model in the photograph will draw the respondent's attention to a specific part of the website.

79 students of the University North between the ages of 19 and 25 took part in the survey. The test was successfully completed by 40 male and 31 female particiConclusion

Analysing the research results, it can be concluded that the direction of the model's gaze in the image significantly influences users. If the goal is for viewers to

ر ل ل Hu, Z., Gendron, M., Liu, Q., Zhao, G., & Li, H. (2017). Trait anxiety impacts the perceived gaze direction of fearful but not angry faces. Frontiers in psychology, 8, 1186.

Hutton, S. B., & Nolte, S. (2011). The effect of gaze cues on attention to print advertisements. Applied Cognitive Psychology, 25(6), 887-892.

Kavitha, T. (2017). Consumer buying behavior of online shopping-A study. International Journal of Research in Management & business studies, 4(3), 38-41.

Mirnig, A. G., Meschtscherjakov, A., Wurhofer, D., Meneweger, T., & Tscheligi, M. (2015, April). A formal analysis of the ISO 9241-210 definition of user experience. In Proceedings of the 33rd annual ACM conference extended abstracts on human factors in computing systems (pp. 437-450).

Wang, Q., Wedel, M., Huang, L., & Liu, X. (2018). Effects of model eye gaze direction on consumer visual processing: Evidence from China and America. Information & Management, 55(5), 588-597.

y Monsuwé, T. P., Dellaert, B. G., & De Ruyter, K. (2004). What drives consumers to shop online? A literature review. International journal of service industry management, 15(1), 102-121.