

A NEUROSCIENTIFIC APPROACH ON THE IMPACT OF INFORMATION OVERLOAD ON CONSUMERS' ATTENTION

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Abstract

- Information overload represents one of the biggest problems of our times, as consumers are constantly exposed to different types of information from commercial and non-commercial sources.
- There are presented the Eye-Tracking results for two advertisings, one having a small number of objects and one having a bigger number of objects (overload condition).
- The results of the total viewing times and of the entry times show that for the advertising with a smaller number



Source: <https://medium.com/@marinazel/its-not-information-overload-it-s-filter-failure-productivity-in-the-industry-4-0-d715a59f4cb>

Results

Object in advertising	Mean total time (ms) in overload condition	Mean total time (ms) in reduced info condition	SD total time (ms) in overload condition	SD total time (ms) in reduced info condition	F	p
Message Text	2168.1	5599.4	1787.1	1563.1	41.7	.000
Picture 1 vs single picture	1886.4		1293.2		1.3	.254
Picture 2 vs single picture	1024.9	2344.8	873.5	1206.6	15.7	.000
Picture 3 vs. single picture	1669.8		1344.7		2.7	.103
Logo vs Logo	438.2	823.2	415.0	624.3	5.2	.027
Description vs Logo	664.9		1288.1		.245	.624

Table no. 1 Overload vs. reduced information condition of eye tracking results based on total viewing time of objects
Source: Own research results

- The discriminant analysis of the total times resulted from the Eye-Tracking experiment shows that the consumer watches for a longer time the objects of the advertising in the reduced info condition in comparison to the overload condition.
- 17/22 consumers have watched the logo in the overload condition.
- 20/22 consumers have watched the in the reduced info condition.
- 11/22 have watched the description of the touristic destination in the overload condition.

Introduction

"The concept of information overload was first proposed by Bertram Gross"

Gross, B., 1964. *The Managing of Organizations: The Administrative Struggle*. New York: Free Press of Glencoe.

"Too much information can overwhelm the advertising message and lead to information overload for consumers"

Pieters, R., Wedel, M. and Zhang, J., 2007. *Optimal feature advertising design under competitive clutter*. *Management Science*, 53(11), pp. 1815-1828.

"The concept of information overload is more actual then ever in a society dominated by intelligent devices who process information in a more rapid and efficient way"

Pelau, C. and Ene, I., 2018. *Consumers' perception on human-like artificial intelligence devices*, *Proceedings of the 4th BASIQ International Conference*. Heidelberg, Germany

Methodology

- Objective:** to determine the unconscious reactions of consumers to visual object overload in advertising
- Hypothesis:** a high number (overload) of objects or information in an advertising will distract the attention of the consumers from its main message
- Number of participants:** 20
- Ages:** 20-25 years
- Scenario:** perform a comparison regarding unconscious reactions of consumers towards two advertisings, with the help of an eye tracking device. The consumers had to watch for 10 seconds two tourism advertisings with different number of objects:
 - 1st picture: overload condition
 - 2nd picture: reduced info condition
- Both advertising have targeted exotic destinations, being dominated from a visual point of view by a sky-blue color and exotic elements. Both offering companies are local brands and have an under average familiarity.



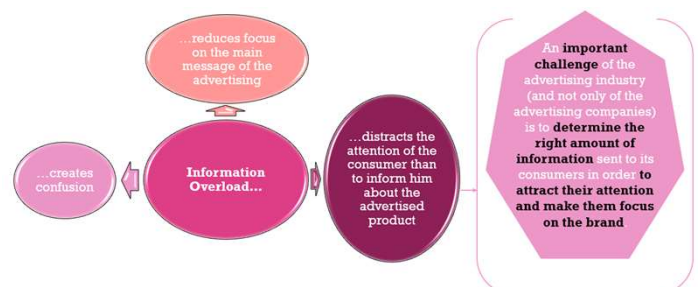
Source: www.marketwatch.ro/articol/15081/Investitia_in_tehnologie_du_ce_cercetarea_in_marketing_in_prime_time/

Object in advertising	Mean entry time (ms) in overload condition	Mean entry time (ms) in reduced info condition	SD entry time (ms) in overload condition	SD entry time (ms) in reduced info condition	F	p
Message Text	817.1	304.1	966.5	181.7	5.443	.025
Picture 1 vs single picture	720.5		1510.8		5.661	.022
Picture 2 vs single picture	3692.0	2195.5	2302.9	2324.7	4.183	.048
Picture 3 vs. single picture	1797.5		1490.2		.415	.523
Logo vs Logo	4468.8	4236.1	3601.6	1915.2	.065	.800
Description vs Logo	3110.6		3550.6		1.557	.220

Table no. 2 Overload vs. reduced information condition of eye tracking results based on entry times of viewing the objects
Source: Own research results

- The message text has been the most attractive one for the reduced info condition.
- The logo and the description text have been watched last.
- The results show that an advertising with a lower number of objects gives the viewer the possibility to focus more on the objects of the advertising, by watching them more attentively for a longer time.
- An advertising with a high number of objects provides more information about the product or destination, but because of the dispersion of the attention of the viewer, his/her capacity to focus or to memorize the main message is lower.

Conclusions



Limitations:

- Small number of respondents due to technical issues;
- Young participants.

