

# Do we choose what we look at or it's our brain that chooses?

A cognitive approach to the relation between visual attention and perception based on advertising stimuli.



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Initial question:

When talking about graphical stimuli (advertisements) attention is... ?

a conscious process

an involuntary process

leads to a voluntary perception of the existing stimuli?

perception comes after the selection of the stimuli our brain has previously chosen?

Previous research of Cognitive Psychology based on advertising attention and perception documents that our cognitive response directly depends on the level of attention focused on the existing stimuli. To understand this question, we need to determine the parameters governing our level of attention.

Recent work related to attention and perception of graphic advertising stimuli has been explored from two different points of view:

## Influence of exogenous variables on attention

Exogenous variables: variables coming from outside the system (in this case, the features of graphic advertising).

Exogenous variables controlled in investigations on attention and perception of graphic advertising stimuli:

- Visual salience of the advertising stimuli in terms of size of the ad (Homer, 1995; Finn, 1988; Grønhaug, Kvitastein and Grønmo, 1991; Zhang, Wedel and Pieters, 2009)
- Size of specific elements (Finn, 1988; Pieters and Wedel, 2004)
- Distances between elements, colors and their symbolisms (Añaños et al., 2009; Walters, Apter and Svebak, 1982; Finn, 1988; Grønhaug et al., 1991)
- Context in which ads are published (Boerman, 2010; Moorman, Neijens and Smit, 2002)
- Object complexity and representation resolution (Xu and Chunand, 2009)
- Shape of elements and images included in ads (Barri, 2006).

All studies have reported influences of these exogenous variables on human attention and cognitive processes.

## Influence of endogenous variables on attention

Endogenous variables: those spontaneously generated from an individual's internal state such as motivations, previous experience and knowledge, goals in mind, motivation, expectations, fears ...

Discoverings on endogenous variables controlled in investigations on attention and perception of graphic advertising stimuli:

- Motivations and behaviors controlled below the conscious awareness, deeply influencing our perceptions. (Matukin, 2010)
- Attention prioritizes stimulus processing on the basis of motivational relevance, and expectations constrain visual interpretation on the basis on prior likelihood. (Summerfield and Egner, 2009).



## Relation between exogenous and endogenous variables on attention

This question has only been approached by some researchers:

- Wells (2000): there are relation between color and size (exogenous) and interest (endogenous) in recall, recognition and memorability, and consequently in attention and perception.
- Pieters and Wedel (2007): different patterns of visual attention are promoted when different processing goals are demanded. Informativeness of the ads and the objects contained are also essential clues on attention patterns.

- Grimes (2006): mere exposure and low involvement may influence perception of ads, resulting in spontaneous stimulation of affective responses, without the need for high levels of attention created manipulating exogenous variables.

- Ruiz and Lupiáñez (2002) propose the concept of "attentional capture", the conditions that give involuntary attentional priority to irrelevant stimuli. "Attentional capture" is due to exogenous factors, but is also susceptible to endogenous.



Previous studies provide important answers to the initial questions, although there are some unexplained items that would lead to relevant findings:



Final questions:

How these two influences (endogenous and exogenous variables) overlap, differ and interact in our attention and perception of visual ads?

What happens with stimuli (ads) that strongly appeals to endogenous variables and, at the same time, have exogenous factors that attract or repeal our attention?

Proposals for further investigations:

Approach this topic from experimentation and theoretical revision of Cognitive Psychology studies about attention and cognitive processes.

Study this relation on basis of highly psychological involving advertising topics: blood donations, safety driving, drug or AIDS prevention, or action against poverty.

