

Subliminal Influence: Inducing an Image into an Unsuspecting Mind

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ABSTRACT

Introduction: Subliminal perception is the registration of a stimuli below the level of consciousness; particularly stimuli that are too weak (or too rapid) for an individual to consciously perceive them (APA). The present study aims at examining the effect of visual subliminal stimuli on the ability to detect the content of the stimulus. **Sample:** Eighty-eight female participants belonging to the age group 18 to 25 years were included in the study. **Method:** Eighty-eight participants were divided into three different groups. Participants in each group were required to watch 10 stock videos of 15 seconds each, in which different images of the most famous Indian celebrities were shown. No stimulus was present in the control group, whereas in the experimental groups the stimuli were presented for 16 milliseconds and 32 milliseconds respectively. After each video, the subjects were asked to name a celebrity that came to their mind. It was observed whether the participant's response corresponded to the actual image of the subliminal stimulus. **Results:** The data showed that there is no significant difference between the responses of the three groups. Therefore, no effect of subliminal perception was detected in any of the cases.

Keywords: *Subliminal Influence, Level of Consciousness, Perception, Visual Stimuli, Subliminal, Cognitive*

Subliminal perception is the registration of a stimuli below the level of awareness, particularly stimuli that are too weak (or too rapid) for an individual to consciously perceive them (American Psychological Association). Researches on this topic gained significance after marketer James Vicary in 1957, claimed to have flashed the messages “Eat popcorn” and “Drink cola” several times in a movie for 3ms which resulted in a significant increase in the sales of popcorn and cola together.

Before Vicary, in 1884, an experiment by Pierce and Jastrow also proved the existence of subliminal perception. Subliminal messages are considered to get registered in the subconscious level of mind which results in affecting people's behaviour when triggered by an external cause. Hence, it's often used in advertisement marketing.

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However, there are several arguments on this matter. The effectiveness of subliminal messages is still in conflict. Some researches and their results prove the effectiveness of the subliminal stimulus, whereas some results fail to do so. Hawkins in 1970, conducted an experiment where he subliminally presented the words “COKE” and “DRINK COKE” to the test group and a nonsense string of letters like “NYTP” to the control group. “DRINK COKE” did not incline people to drink more coke, thus declining the positive result of the experiment (Brannon & Brock, n.d. and Blackwell & Halasz, 2007).

In 1990, in a typical experimental procedure, Kotze and Moller presented neutral and emotional words subliminally while recording Galvanic Skin Response (GSR). The results showed a significant increase in the GSR response only for emotional words. It was concluded that auditory subliminal stimulation would increase the GSR.

Another experiment was conducted by Katharina Henke, Theodor Landis and Hans J Markowitsch in 1994, where they subliminally presented to the subjects words and faces to each visual half-field. From the result of that experiment, it can be demonstrated that subliminally presented stimulus does influence subject’s behaviour.

Several researches continued on the effect of subliminal stimulus on human behaviour. In 1994, another research was conducted by Underwood. He presented the experimental or primed group with a smiling face of a woman 7 times for 20ms each and the control group with a blank prime during a short clip. At the end of the clip the same woman with a neutral facial expression was shown and was asked to the subjects to report if the woman was happy or sad. The subjects reported a “contrast effect” which means the primed group reported seeing a sad face while the control group reported seeing a happy face.

As these experiments support the occurrence of subliminal effects on human behaviour, several experiments also argue with the same. In 1992, Canadian Broadcasting Corporation (CBC) flashed the message “CALL NOW” subliminally during a show 252 times. As a result, there was no significant increase in the measure of callers that day and also no one guessed the subliminal message correctly.

Also in 1995, AG Greenwald, MR Klinger, and ES Schuh conducted an experiment to investigate subliminal perception in a regression-based test. The assumptions were inconsistent, thus declining the effect of subliminal perception in human behaviour.

Do the subliminal effects really work? There are several articles debating this. An article by Simon Ruch, Marc Alain Züst, Katharina Henke published in August 2016 prove that “Subliminal messages exert long-term effects on decision making”, whereas several articles, including one by Timothy E. Moore in 1982 which mentioned “Subliminal Advertising: What You See Is What You Get” prove the declination of subliminal messages.

The present study aims to evaluate whether the previous findings of these experiments are valid. The results may confirm or disaffirm the effect of subliminal perception on human behaviour.

METHODOLOGY

This research paper examines the effects of visual subliminal perception on the human mind. The detailed summary of the methodology used to conduct the research will be explained in this chapter.

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This study seeks to examine whether human mind can perceive a subliminal stimulus when displayed for:

(i) 16 milliseconds and (ii) 32 milliseconds.

This study also aims to find out whether there is an effect of subliminal stimulus on human mind.

Participants

Eighty-eight female participants belonging to the age group of 18 to 25 years were randomly assigned to one of the three conditions: ten without stimulus videos, ten with (single) stimulus videos and ten with (double) stimulus videos.

Procedure and Design

The experiment was conducted by showing the participants the videos in separate rooms or by keeping safe distance between them, according to the situation. This was done so that the subjects were not influenced or distracted by any other environmental factors.

In this experiment, quantitative research methodology was followed. 90 participants were divided into 3 separate groups and each group were given proper instructions before the start of the data collection. The 3 groups were the following: Group 1- Without any stimulus, Group 2- With single stimuli, in which 16 millisecond stimuli exposure was presented and finally Group 3- With double stimulus, in which 32 millisecond of stimulus exposure was presented. Group 1 i.e., the group without any stimuli was considered the control group of the experiment, as the general answers to the designed questions were observed through this group. Group 2 and Group 3 were considered as the experimental group as, like the name suggests, the working of subliminal stimulus on human unconscious mind were observed through these videos.

For each group, instruction was such that the participants with fresh and cooperative mind, needed to watch 10 videos of 15 seconds each. After every video, 1 question would be asked, and they needed to answer it. It was to observe whether the participants spontaneously recognized the stimuli/stimulus present in the video. This way, we could understand whether there is any effect of subliminal stimulus on human behavior.

Materials

We created the videos in Adobe Premiere Pro CC 2022 and the videos were shown to the participants in MP4 Format (1920x1080 pixels) which is the standard HD resolution. The videos had 16:9 aspect ratio with a frame rate of 60.00 frames/seconds. The Standard FULL HD 1080p resolution was chosen as it is the standard resolution for many applications. The subliminal message was presented for 16 milliseconds (single frame) for one set of videos. The second set of videos was presented for 32 milliseconds (double frame) and these two groups acted as the experimental group. There was a third set of videos in which no subliminal message was presented which acted as a control group. Each video from each set of experimental groups contained various images as subliminal messages containing actors, actresses, singers, cricketers and cartoon characters. Apart from the subliminal messages, each video consisted of various frames of cityscapes for a total duration of 15 seconds. A total of 30 videos were presented to three different groups. To prevent the possibility of a learning effect, the videos of the experimental group were presented in random order.

RESULTS

The findings indicated that there was no significant difference present between the two groups. Therefore, the subjects were not able to detect visual subliminal stimuli on both of the single stimulus and double stimulus cases and thus, no effect of visual subliminal stimulus was found.

DISCUSSION

In this experiment on subliminal perception, we tried to investigate whether a stimulus which cannot be consciously detected, i.e., subliminal, can influence a subject. The captured data is presented here. The effects were analyzed depending on the frequency with which the subjects succeeded in perceiving the stimulus presented to them.

After analysis of the data, it can be seen that there is no significant difference between the data obtained from showing the single stimulus videos and those obtained from showing the double stimulus videos. Therefore, no effect of subliminal perception was detected in both the cases.

Similar findings were obtained in previous research conducted by Hawkins in 1970, where it was found that subliminal stimulus does not actually affect an individual's decision making. Also, research by AG Greenwald, MR Klinger and ES Schuh in 1995 showed negative evidence even after presenting the stimuli for 200 milliseconds. In another research by Katarína Kosikova, Ľubor Pilarik, they presented a stimulus for 2000 milliseconds, 16 milliseconds and 1000 milliseconds, but no statistically significant result was found.

Though in some other researches, adverse results were found. For instance, in research conducted by K. Henke, T. Landis and H.J. Markowitsch, it was found that subliminal stimuli may affect human behavior but there, the stimuli were presented for a greater frequency of time. In another one conducted by Mihai Radu Ionescu in 2016, it was observed that participants did perceive the stimulus when it was shown for a longer period of time without being aware of perceiving anything.

Therefore, it can be observed that the present study did ascertain that the human mind is unable to perceive a stimulus when displayed for (i) 16 milliseconds and (ii) 32 milliseconds. However, that does not establish that subliminal perception is impossible for the human mind. Exposure to the subliminal stimulus for a longer period of time may have indicated a different result. Furthermore, the stimulus may have been foreign to some subjects which may also have contributed to the negative results.

CONCLUSION

The present findings were limited to undergraduate and postgraduate students, aged between 18 and 25 years so, a broader range of subjects may have given a different result.

Further research efforts are required to have an in-depth and complete understanding and analysis of subliminal perception. In most of the researches people were presented with subliminal stimulus chosen by the researcher. It may happen that people perceive the stimulus depending on their field of interests. Though no such evidence has yet been found.

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Conflict of Interest

The author(s) declared no conflict of interest.

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