Subliminal Message Effects on Color Preference and Self Esteem

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Abstract

This study examined the use of subliminal messaging and its effects on sujective ratings of self esteem and color preference. Participants viewed a video in which half were presented with a subliminal message that said "I am wonderful" as well as had a red background on the computer screen they watched the video from. The other half saw the same video but were presented with no subliminal stimuli. The results did not produce significant findings. However, though not significant the results did show a difference in both color preference and self esteem ratings between the two groups.

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Introduction

We've all heard of subliminal messages and their power to make you crave certain foods and have certain preferences. However, whether or not subliminal messaging is actually effective is still controversial. The research is mixed on if and when subliminal messaging works. It is important to understand if this phenomenon is really effective and if so at when and in what specific situations it works. There are many different possible uses for this information. First, and most obvious it can be used to form marketing strategeies by businesses and more importantly then used by consumers to understand what causes them to like or dislike certain products. It is also important for motivational and self esteem techniques. It may be possible to alter peoples self esteem at least temporarily or make them more motivated to achieve a certain goal through the use of subliminal messaging.

One study has looked at subliminal messaging in television commercials and its impact on preferences for certain products. Participants were shown commercials with subliminal messages and with no messages. This study showed a small but significant increase in subjects' intention to use the product with subliminal messaging compared to no messaging. (Smith, 1994) This shows that even though small, there is an effect of subliminal messaging on preferences.

Another study examined the effects of subliminal messaging on reducing anxiety. It tested participants of different levels of self-identity and the ability of subliminal messages to reduce anxiety in these different groups. It found that all groups had reduced anxiety with the presentation of a certain symbiotic subliminal messages that said "Mommy and I are one." (Orbach, 1994) This study shows that it is possible to change

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not only one's preferences but one's mental state as well with the use of subliminal messaging.

A third study we assessed looked at the ablity to detect subliminal messages. When one does subliminal messaging studies one tries to present the stimuli just short of them noticing it. That is you want it as close to the subjects threshold for recognition as possible. However, if the stimuli is presented too short this may decrease the power or effect of the stimuli. This study examined the possibility that participants threshold actually varies and is not stable. Therefore past experiments may have had reduced effect and not realized a subliminal effect because the stimuli was not presented close enough to the threshold. (Miller, 1991) This may be important for many studies that have had only a small or no effect for subliminal messages such as the study by Smith et. al presented above.

In this study the effects of subliminal messaging on self esteem and color preference were measured. We predict that presenting subliminal messages to enhance a color preference and others to enhance self esteem will increase the preference for the color and increase subjective ratings of self esteem. However, we hypothesize that there will be a larger effect with respect to color preference enhancement than self esteem.

<div align="center">Methods</div>

Participants

Fourteen subjects participated in this experiment. The participants were all undergraduate students. They were not compensated for their participation but received credit for a class for partaking in the experiment.

Materials

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A pre-survey was given to participants which contained questions from the Rosenberg Self Esteem Scale as well as irrelevant deversion questions about humor. A post-survey was also given which contained comparable questions. The video used was a five minute and twenty second clip from a Seinfeld episode.

Apparatus

The computer used was a Dell Opiplex GX620. A Sharp Notevision was used to project the video onto a projection screen. The video was edited to add subliminal messages by a student majoring in film.

Design

The experiment was between subjects. Half the participants were in the subliminal condition and half were in the non-subliminal or control condition. The two conditions were exactly the same except for the presentation of the subliminal messages within the video for the subliminal group.

Procedure

Particpants were first asked to take a piece of paper from a bag. The paper contained the number one or two which assigned them to one of the two groups. All surveys were placed at a seat in the room. Then participants entered the room and were asked to take a seat at one of the seats with a survey. One of the experimenters then went around the room with a bundle of pencils and participants were asked to take one to fill out the survey. Participants were told to turn over the survey when finished. Upon completion, surveys and pencils were collected by an experimenter. A short video clip was then shown. For the subliminal group a subliminal message was inserted into the video which flashed the phrase "I am wonderful" five times at intervals throughout the

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video. A red background was also used for the computer screen during the playing of the video. For the nonsubliminal group no message was flashed during the video and a white background was used during the playing of the video. At the conclusion of the video clip a second post-survey was passed out to participants. A bundle of pens was also handed out and participants were asked to chose a pen. There were 45 pens total, with fifteen blue, black, and red pens each. After completing the survey, the pens and surveys were collected and the participants could leave.

Results

We predicted that the preference for red would be higher in the subliminal group versus the nonsubliminal group. This hypothesis was not supported. Participants in the subliminal group did choose a higher frequency of red pens than participants in the control group. However, these results were nonsignificant with an ANOVA test showing $F(1,12) = .000$, $p = 1.000$.

We also predicted that their would be a larger increase in self-esteem for the subliminal group than the control group. There was a difference in groups with the subliminal group having a larger increase in subjective ratings of self-esteem. (See Table 1) However an ANOVA test showed that this difference was nonsignificant, $F(1, 12) = .466$, $p = .508$.

Discussion

Although are results were in the right direction and did show differences between the two groups, none of them were significant. There are many possiblities for why this was the case.

One of the major problems was sample size. We had a total of only fourteen

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participants, leaving seven in each condition. This could have caused a type II error. There might have been too small of a sample size to produce a significant effect even though the effect was there.

Another problem was the ceiling effect we had with self esteem ratings. Most all the participants started out a such high self esteem there was not much room for improvement. It may have been a problem with the sample population. The students at the university might have simply a higher self esteem than the general population. To correct this we might have used a different sample population that did not consist of only college students. Another solution may be to lower their self esteem in the beginning and then from there try to raise it with the subliminal message.

There were also possible reasons for the color preference portion not showing significant results. There were many factors in the room, noticed later that could have contributed to their color preference as much as the background of the computer screen. While we all tried to wear colors other than black, red, or blue to influence them the room had many of these colors in it. For example on the computer screen itself the border around the video clip was blue. The participants also had black computer screens right in front of them for the duration of the experiment. To resolve this issue participants should be placed in a plainer room with mostly white so that nothing else in the room may influence their color choice. It may have also been that participants started out with a predisposition to like blue or black pens more than red pens. And this may have had an effect on our results as well.

Another limitation we had in our study was the limited access we had to professional editing equipment. The subliminal stimuli may have been to small or to

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presented for too short a time to have a significant effect. Future studies may want to use

more professional equipment to edit the video so that the stimuli can be presented longer

and larger while still not being consciously visible by participants.

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Graph 1

Table 1

	N	*Mean*	*Standard Deviation*
SUBLIMINAL	7		
Pre	7	34.86	3.72
Post	7	36	3
NONSUBLIMINAL	7		
Pre	7	33	2.83
Post	7	33.29	3.32

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