Backmasking: Annihilating the Effects of Good and Evil[1]

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The present study investigated whether information could be perceived from recorded messages played backwards. Specifically, verbal commands were constructed that fell into three categories: Evil, Neutral, and Good. Participants listened to 33 sound files and for each file they were asked to rate how good/evil the backward message seemed on a 7-point Likert scale. These ratings were compared to ratings of the sentences presented normally (in print). The backward condition showed no indication that the messages were accurately perceived. The forward condition, however, showed a significant effect of good/evil. Implications of these findings are discussed.

Introduction

Brannon and Brock (1994) define subliminal messaging as "any devices used to convey or attempt to convey or attempt to convey a message by means of images or sounds of a very brief or hidden nature that cannot be perceived at a normal level of awareness". Another way to define subliminal messaging is the awareness of stimulus that is absent and/or present. One sort of subliminal messaging is called back-masking, which is when a message can be played in the forward, normal fashion, normal speech or music is heard; when that same message is played backwards another message can be heard. A growing concern among the general public was that younger generations might perceive these messages as "loose morality and behavioral aberration" (Vokey & Don, 1985). However, in order to have a valid concern, evidence must first be found to support such fears.

Pastor Gary Greenwald of the Eagle's Nest Fellowship in California was among the first to popularize the potential concerns of backward messages embedded in music (Vokey & Don, 1985). He held a seminar and spoke primarily against the back-masking of the rock music. Since the seminar by Pastor Gary Greenwald, there have been many songs believed to contain back-masking. Shortly after Pastor Greenwald's seminar, Arkansas passed a bill that would require warning labels on all music CD's that may contain subliminal messaging. The specific wording is,

"Warning: This record contains backmasking which may be perceptible at a subliminal level when the record is played forward" (Vokey & Don, 1985).

Vokey and Don (1985) asked 65 college students whether they believed messages played backwards could be understood. It was shown that, on average, most students did not think it was possible to understand messages played backward. The researchers also conducted a study to see if participants could identify the sex of the speaker when messages were played backwards. With the accuracy of 98.9%, the participants were correctly able to identify the sex of speaker (Vokey & Don, 1985). Research by Swart and Morgan (1992) "presented messages in backward recordings of music and found that backward messages (e.g., "Clean up your room") did not affect Likert-scale attitude ratings for statements such as "Keeping my bedroom clean and neat is important.""".

There has been further research on how one makes a subliminal message within the various songs. According to Moore, back-masking messages can be made by "slurring portions of speech in the forward mode in order to produce some intelligible signal when the recording is reversed" (Moore, 1988). One well known song for this concept would have to be Led Zepplin's famous "Stairway to Heaven" song. When the song is reversed the subliminal message comes across as, "Oh here's to my sweet Satan. The one whose little path would make me sad, whose power is

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Satan. He'll give those with him 666, these was a little tool shed where he made us suffer, sad Satan." (jeffmilner.com/backmasking.htm). Other songs that have been linked to back-masking are; "Another One Bites the Dust" by Queen, "Imagine" by John Lennon, and "My Name is…" by Eminem.

Vokey and Don (1985) presented participants with phrases from Jabberwocky. Although the message was played numerous times to participants, nothing was found. However, after making the participants aware of the contents of the message they were then able to hear the messages. This finding supports the hypothesis that perception of backward messages requires priming, or a guiding context within which to interpret the sounds.

A controversial court case that dealt with subliminal messaging involved the band Judas Priest. The band was taken to court on the grounds that their song was "portraying a hopeless view of life saying "Do it"", which then made two men kill themselves after listening to the album (Brannon & Brock, 1994). The court ruled that the subliminal messages were in fact there, but were never put there by the band for that matter. The band was not held accountable for the deaths of the two men.

Although published research tends to support the idea that Backmasking is not perceptible, the studies typically use lyrics embedded in music. It might be the case that the addition of musical sounds degrades listeners' perceptions of backward messages to the point that they are difficult to observe in the studies performed to date. In other words, in order to provide the strongest test of backward perception, idealized stimuli should be used. In the present study it was hypothesized that simple spoken sentences (commands) played backward would have the best chance of providing evidence of backward perception.

Method

Participants

The participants in the study were 53 college aged individuals primarily from Robert Morris University. There were 33 participants in phase one of the study (reverse condition) and 20 participants in phase two (forward condition) of the study. There were approximately equal numbers of male and female participants.

Design & Materials

The present study used a 2x3 mixed factorial design in which Stimulus Direction (forward, backward) was manipulated between subjects, while Command Valence (evil, neutral, good) was manipulated within subjects. The sentences were constructed such that there were 10 evil commands (e.g., "Stab your neighbors in their sleep."), 10 neutral commands (e.g., "Breathe in as deeply as you can.") and 10 good commands (e.g., "Always be nice to others."). The sentences were recorded by a male who read all 33 sentences. The voice files were then converted to separate sound files which where digitally reversed. Three additional sentences were constructed (recorded and reversed) for use as practice trials. To control for possible length effects, the average number of words per sentence was equated for all stimulus groups (mean of 6.3 words).

Procedure

There were two phases to the study. In phase one, 33 participants listened to and rated each backward sentence using a 7-point Likert scale (1 = Evil, 7 = Good). Sentences were played in a random order, but the same random order was used for all participants. One participant's data were discarded for not having ratings for all the stimuli.

In phase two, the forward sentences (including the three practice sentences) were presented to 20 participants in the same random order used in phase one. Participants read each sentence and rated the sentence using the same Likert scale used in the earlier portion of the study.

Results

A 2-factor mixed analysis of variance (ANOVA) was conducted on mean ratings for all conditions. The analysis resulted in a main effect of Stimulus Direction, $F(1,50) = 7.57$, $p < .01$, in which forward stimuli were rated as relatively neutral (mean = 4.01, SD = 2.04) while reversed stimuli were rated as somewhat evil (mean = 3.50, SD = 0.85). Also significant was the main effect of Command Valence, $F(2,100) = 183.2$, $p < .01$, in

which evil commands were rated as relatively evil (mean = 2.67, SD = 1.26), neutral commands were rated as relatively neutral (mean = 4.05, SD = 0.99), and good commands were rated as relatively good (mean = 4.38, SD = 1.46).

Of particular interest was the significant interaction, $F(2,100) = 307.9$, $p < .01$. As can be seen in Figure 1, reversed sentences were almost uniformly rated as neutral, while the forward sentences were rated consistent with their valence.

Figure 1: Interaction of Command (stimulus) Valence and Stimulus Direction.
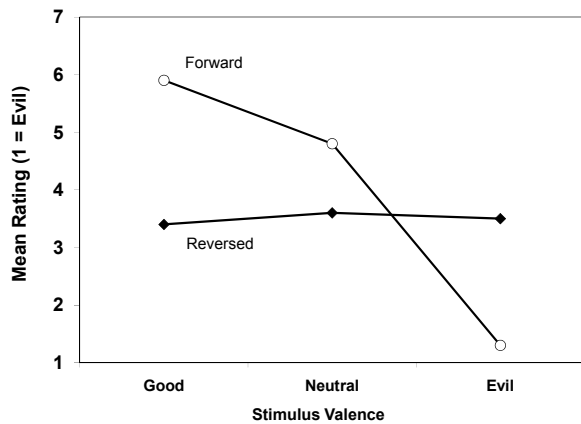
Discussion

For this study, it was found that in the absence of potentially distracting music well articulated sentences played backwards do not convey any information whatsoever. This outcome, in the presence of the clear effects of meaning conveyed in the forward condition, leads to the conclusion that Backmasking effects in music are extremely unlikely.

Future studies can improve on the present methodology by more directly comparing forward and backward sound files. In addition, given that participants in the backward condition tended to rate the sentences as somewhat evil, future research might examine the possible associations of good and evil that listeners ascribe to the vocal qualities of male and female voices played backwards. With that study, it could be quite possible that ratings of the auditory messages could be based upon the tone of voice or vocal pacing, rather than the actual contents of the message.

References

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