

# *Effects of film violence on subsequent operant conditioning.\**

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## Abstract

*Viewing a violent film enhanced only the acquisition of a verbally reinforced word class that had a meaningful connection to the film. A nonviolent film and no film condition failed to produce this effect; however, the nonviolent film did influence conditioning. The findings suggested two potentially fruitful avenues of inquiry.*

Whether viewing film violence leads to an increase or decrease in aggressive behavior is a much debated issue today. Past research indicates that film violence can bring about more aggressiveness under some circumstances, but not others (Berkowitz, 1965, 1970; Berkowitz and Green, 1967; Feshbach, 1964; Hartmann, 1969; Hoyt, 1967; Lefcourt et al., 1966; Meyer, 1972). Such findings probably hinge as much on generalization to life situations as on arousal or catharsis of an aggressive predisposition.

Investigators have demonstrated the effectiveness of verbal reinforcement in increasing the frequency of verbal response classes (Greenspoon, 1951; Gross, 1959; Reidy, 1958; Taffel, 1955), and specifically hostile word responses (Buss and Durkee, 1958; Ferguson and Buss, 1960; Loew, 1967; Lovaas, 1961; Simpkins, 1961).

With this premise in mind, the present study examined the effects of film violence on the acquisition of a verbal response having a meaningful connection with the film.

## Method

Sixty Marshall University students taking General Psychology participated in the experiment. Each person was preassigned to one of three conditions.

One third of the participants viewed a five minute battle scene from the motion picture "Fighting Seabees" by means of a videotape machine and television monitor. Another third of the participants saw a five minute nonviolent film on panel discussions. The remaining participants received no film.

The rest of the procedure was the same for all participants. Slides were projected on a small screen next to the monitor. Each slide consisted of the pronoun "they" and two words equated for frequency of usage in the English language. One word from each pair was either a hostile verb, such as "murdered" or "stabbed," equated for frequency with a control verb, or a locomotor verb, such as "hopped" or "jogged," also equated for frequency with a control verb. Control verbs fell into neither class and the two verb classes never appeared on the same slide. Eight verbs were used from each class and counterbalanced, such that each verb of a pair occurred equally on the the left and right side of the slide over trials. Every participant in each condition was given a different arrangement of the slides on each trial. Counterbalancing and orders of presentation were determined before data collection.

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The participant's task was to select the correct verb and complete a short sentence. Reinforcement was withheld the first time through the slides. This established a baseline frequency of responding for each verb class. For the next six trials, the participant was verbally reinforced with "that's right" for short sentences containing either hostile or locomotor verbs.

## Results

Using the frequency of hostile and locomotor verbs emitted on each trial as the dependent variables, an analysis of variance was calculated to compare the three conditions and two verb classes over trials. The overall performance of the experimental participants were superior to the control participants for hostile verbs, but not for locomotor verbs. This was supported by the significant conditions by word class interaction [ $F(2,57) = 3.54, p < .05$ ]. All participants showed conditioning over trials [ $F(6, 342) = 29.87, p < .01$ ], yet not differentially so, as indicated by an absence of any interactions with trials. With respect to hostile verbs, the performance of the experimental participants paralleled that of the controls receiving no film (Figure 1). Despite a comparable baseline the nonviolent film group showed the greatest gain over trials. All conditions took a similar course over trials with the locomotor verbs (Figure 2). Finally, performance with locomotor verbs was higher than with hostile verbs [ $F(1, 57) = 18.37, p < .01$ ]. This was apparent even from inspection of Figures 1 and 2.

Figure 1.  
Performance curves for the three conditions as measured by the total number of hostile verbs emitted on each trial.

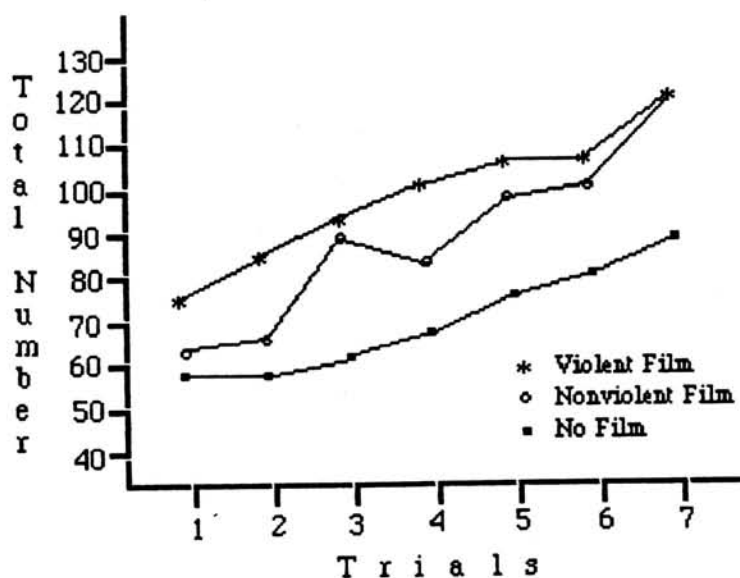
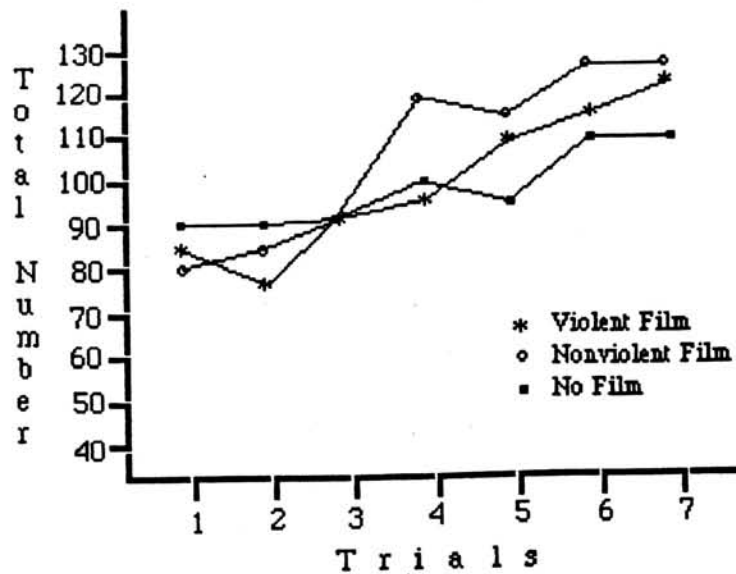


Figure 2.  
Performance curves for the three conditions as measured by the total number of locomotor verbs emitted on each trial.



### Discussion

Locomotor verbs were selected more often than hostile verbs. This was attributable to the greater representation of locomotor verbs having a high frequency of usage in the English language. Despite this stimulus selection bias, there was no effect of the treatment variable on the emission of locomotor verbs (Figure 2). In contrast to this finding was the superior performance of the experimental participants in emitting hostile verbs (Figure 1). Thus, this film violence appeared to generalize to the operant conditioning task by enhancing the performance of only that word class relevant to the film. This effect did not show up initially, but during conditioning. Although the nonviolent film was slightly lower than the violent film in getting participants to emit hostile verbs on the base rate trial, both groups reached the same level of performance by the last trial.

Regarding hostile responses, apparently, any film is more effective than no film at all. However, a violent film is the most effective. Increased aggressiveness may therefore stem from either a general or a specific source of arousal.

Most research on film violence appears to have concentrated on the determination of an effect, either arousal or catharsis. This study suggests two other potentially fruitful avenues of research in this area. One is an examination of generalization effects. A second involves assessing the relative importance of general and specific states of arousal.

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