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ABSTRACT

This study explored children's play behavior as it may be influenced by a particular type of television programming, i.e., shows based on commercially available toys. Subjects were two groups of 5- to 6-year-old and 7- to 8-year-old boys who were exposed to a representative program, The Transformers, which features the Transformer toys. Exposure to the programming was assessed using a self-report with parent verification, while familiarity with the toys was assessed through two ranking tasks and three character identification tasks. The results showed that toy-based programming is an effective tool in imparting knowledge about the toy products associated with the programs. Heavy viewers were able to name more of the 10 representative toys that had been selected for the study than light viewers. The heavy viewers were also more familiar with the attributes of the toys that are based on the scripts of the programs. Some differences were found based on age, with older boys showing greater familiarity than younger boys. (1 table) (EW)

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Toy-based Programming and Childrens

Knowledge of Products

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Problem

This research explores childrens play behavior as it may be influenced by a particular type of television programming--shows based on commercially available toys. Such toy-based programs provide a story line within which the companys toy characters fit and children's rights groups have questionned this use of public airwaves for what have been termed "feature-length commercials". The effects of such programming is relevant to communications policy and has not been systematically addressed. We hypothesize that children who frequently view toy-based programs will acquire detailed knowledge of the attributes and behaviors of the characters depicted, thus furthering advertisers ends. We studied a representitive program, The Transformers, and the associated toy characters depicted in the show.

Method

Two groups of 5-6 year-old and 7-8 year-old boys were recruited from day care centers, religious groups and university resources. Each group consisted of 12 subjects. Exposure to Transformer programming was assessed using a self-report with parent varification procedure. To assess familiarity with the toys, two

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ranking tasks and three character identification tasks were developed. Ten representative Transformer characters were selected and ranked by an expert panel (five 12 and 13-year-old boys who had each watched a minimum of 40 hours of the program) on the dimensions of good-evil and strong-weak. In the ranking task, subjects were presented with a random pile of the ten toys that corresponded to the ten ranked characters and asked to physically line up the toys from high to low on the dimension they were considering. Rankings were done on the two dimensions above counterbalanced over subjects. Rank order correlation coefficients were between subjects and experts rankings. High correlations indicated high knowledge of the toy characters. Subjects were then asked to tell if each of the ten toys was a good or bad character, to name the toy, and asked to identify personal qualities associated with each character. Five traits identified by the panel of experts above were read and subjects responded yes or no to indicate if the character possessed the trait. The number of correct responses were summed to yield a trait score.

Results

Presented in Table 1 are results of the measures of subject knowledge for the different age-amount of viewing groups. For measure 1, correlations between subjects and experts rankings were subjected to a 2 (age group) X 2 (amount of viewing) ANOVA. No interaction or

age effects were found but heavy viewers agreed significantly more with the experts than light viewers (M heavy = .85, M light = .60, $F(1,20) = 14.02$, $p < .001$). An identical analysis was performed on Measure 2, yielding no interaction, a main effect of age such that older children agreed with the experts more than younger children (M young = .41, M old = .67, $F(1,20) = 7.82$, $p < .01$), and a main effect of viewing level such that heavy viewers agreed with experts more than light viewers (M heavy = .65, M light = .45, $F(1,20) = 6.15$, $p < .05$). It seems likely that the discrepancy in age effects is due to younger children's inability to distinguish between the two dimensions.

The remaining measures are strongly affected by linguistic development and differences across age groups would be expected. The remaining analyses were therefore performed within age-groups. No differences were found between heavy and light viewers in either age-group on Measure 3--the number of characters correctly identified as good or evil. The uniformly high scores here indicate that this knowledge is widely shared by boys in these age groups regardless of viewing level. For measure 4, in both age groups, heavy viewers correctly identified significantly more characters than light viewers (t 's = 1.83 and 4.54, $p < .05$ and $p < .001$ for young and old subjects respectively). An identical pattern of results was found for the trait scores in Measure 5; heavy

viewers correctly identified more attributes of the characters than did light viewers (t 's = 4.43 and 2.38, $p < .01$ and $p < .001$ for young and old subjects respectively).

Interpretation

The results support the conclusion that toy-based programming is an effective tool in imparting knowledge about the toy products associated with the programs. Heavy viewers were able to name more of the toys and were more familiar with the attributes of the characters that are based on the scripts of the programs. Toy based programming accomplishes the goal of creating product familiarity in the group of consumers studied.

Table 1

Measures of Subject Knowledge of Transformer Toys as a function of Subject Age and Amount of Viewing

| Measure of Subject Knowledge | Viewer Category | | | |
|--|-----------------|-------------|-----------|-----------|
| | Young-Heavy | Young-Light | Old-Heavy | Old-Light |
| 1. Mean Correlation with Expert Rank on Good vs. Evil Dimension | .78 | .65 | .91 | .53 |
| 2. Mean Correlation with Expert Ranks on Strong vs. Weak Dimension | .50 | .32 | .81 | .53 |
| 3. Mean Number of Correctly Identified Characters (Range 1-10) | 4.67 | 2.00 | 9.17 | 4.00 |
| 4. Mean Number of Characters Correctly Identified as Good or Evil (Range 1-10) | 9.83 | 7.83 | 9.83 | 8.43 |
| 5. Trait Score (Range 1-50) | 27.17 | 11.17 | 34.50 | 19.17 |