Perceptions of Colorization

Colorized films were seen as more contemporary and were evaluated slightly more favorably.


By Barry L. Sherman and Joseph R. Dominick

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and the notion of anticipatory socialization would suggest that these individuals might identify with those in the industry and reflect anti-colorization attitudes. Drawing from the above, the following preliminary hypotheses were suggested:

1) Colorized films will be perceived as more contemporary than their black and white counterparts.
2) Colorized films will be evaluated more favorably.
3) Colorized films will be seen as more realistic. Further,
4) the most negative reactions to colorized films will come from individuals who perceive themselves as “film fans.”

**Method**

**Pretest** Subjects were 234 students enrolled in the introductory mass communications class at a southern university. A pretest questionnaire was administered two weeks prior to the experiment to ascertain the demographics of the sample as well as their media usage habits.

The main goal of the pretest was to determine the degree to which subjects could be identified as “film fans.” Respondents were asked to indicate their interest in film on a scale from 0 (not at all interested) to 100 (extremely interested). The mean score on this measure was 67.3; the median 70.4. In order to isolate the true film fan, rather than a median split, a criterion of 80 or above on the feeling scale was used. This procedure led to the classification of 97 subjects (42.9%) as film fans and 132 (57.1%) as nonfans.

Matthews, op. cit.

Fans attended films more often and watched more TV, including old moves. In addition, they tended to prefer documentaries, historical films and mysteries more than non-fans, who preferred contemporary dramas, spy and war movies. Film fans reported more interest in movies while growing up, were more likely to use films as a primary entertainment source and were more likely to see films recommended by professional critics. In short, the measure appeared to have some conceptual validity.

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Seventy-six (78%) fans participated in the posttest, as did 95 (72%) nonfans.

Analysis indicated that the film viewing habits and preferences of fans were substantially different from non-fans.

**Post Test** The main independent variables in the posttest were the absence/presence of color, the genre of film and whether viewers were film fans or non film fans.

The color variable was operationalized in the following manner. Three colorized films were selected for the study: Yankee Doodle Dandy (1942), Topper (1937) and The Maltese Falcon (1941). Each film was screened to select a representative sequence of approximately three minutes in length. Prior research suggests that viewers evaluate color vs. black and white segments differently after rather short exposure times.

From Yankee Doodle Dandy, a musical production number was chosen. A segment involving mistaken identity and a comedic chase was selected from Topper. In the case of The Maltese Falcon, a confrontation leading to violence was identified.

Each sequence was edited from the original colorized master tapes to six separate VHS cassettes, identified as segments 1 through 6. Segments 1 to 3 were edited and played back in color, segments 4 to 6 were the same sequences from each film dubbed for playback in black and white.

Using a table of random numbers, a proportional number of fans and non-fans were randomly assigned to each experimental condition. On the date of the experiment, the six groups of subjects were escorted to different classrooms, each with its own film segment, VHS player and monitor, and post-test questionnaire containing scales for the various dependent measures. Absence, incomplete information and other factors contributed to substantial mortality. Of the original 234 subjects, 171 (73%) successfully completed the experiment.

In each experimental condition, subjects were asked to relax and enjoy the upcoming film segment. Lights were dimmed and the segments played without
interruption. Following the screenings, subjects were asked to complete a three-page questionnaire containing scales for the various dependent measures.

First, a set of 15 seven-point bipolar semantic differential scales was utilized to determine subjects' perception of the film. These scales included four adjective pairs that typically load on the evaluative dimension (good-bad, ugly-beautiful, pleasant-unpleasant and positive-negative), three that are commonly found on the potency dimension (strong-weak, heavy-light and hard-soft), and three that usually define the activity factor (active-passive, fast-slow and calm-excited). Five other adjective pairs were also included: clear-fuzzy, new-old, honest-dishonest, familiar-strange and real-unreal. A factor analysis of these data using a Varimax rotation disclosed, not surprisingly, the familiar evaluation, potency and activity dimensions along with a weak fourth factor that was difficult to interpret. The traditional adjective pairs mentioned above loaded highly on their respective factors and scores were summed across subjects to construct a total score on each dimension.

Next, on a five-point scale ranging from "extremely likely" to "extremely unlikely," subjects were asked to assess the likelihood that they would watch this movie on their home television set.

To gauge the influence of colorization on the perceived age of the films, two items were included. First, subjects were asked to indicate the decade in which they thought the film had been made. Next, they were asked to guess the exact year it was made.

To assess prior knowledge about the three films, respondents were asked if they could name the films from which the segment they viewed had been taken, and to identify as many actors or actresses as they could recognize in the sequence.

On a final, separate page of the questionnaire, knowledge and attitudes about the colorization process were assessed. After being presented with a short paragraph describing colorization, subjects in the black and white conditions were asked if they would have preferred to see the segment in color. In the color condition, subjects were asked to identify if the film was originally in color, or had been colored later on.

The effects of the critical independent variables, color, genre and fan/non-fan were mapped using the factorial ANOVA and MANOVA subroutines. An alpha level of p=.05 was set for all statistical tests.

Results

Sample Characteristics. The majority of the sample (59.8%) was female. About four in five (84%) fell in the 16-20 age group; the remainder were either 21 to 25 (14%) or older than 25 (2%). Half were sophomores, a quarter were freshman, the remainder juniors (19.7%) or seniors (3.8%).

The colorized and black and white groups did not differ with regard to prior familiarity with the three chosen films. About one-third of each group had previous experience with them and were able to name the film from which the segment was taken.

Analysis of Variance. A three-way analysis of variance employing a 2 (color vs. black and white) x 2 (film fan, non-fan) x 3 (film genre) design was used to analyze the data. Table 1 contains a summary of these results.

First, with one exception, none of the three-way interactions among colorization, genre and fan were significant. The only one to achieve significance (p < .05) was difficult to interpret. On the potency scale of the semantic differential, among those who saw the black and white version, fans rated the comedy segment as less potent than non-fans while among those seeing the colorized version, the opposite occurred.

Second, again with one exception, none of the two-way interactions was significant. Somewhat inexplicably, subjects who viewed the black and white versions of the musical and comedy excerpts were more in favor of colorization (p < .02)

Since this was an exploratory study results with a significance level of .10 are reported as matters of general interest.
TABLE I

Summary of Analysis of Variance Results

<table>
<thead>
<tr>
<th>Variable: Year of Production</th>
<th>Source of Variation</th>
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<tbody>
<tr>
<td></td>
<td>Fan-Non-Fan</td>
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<td>Color BW</td>
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<td></td>
<td>Genre</td>
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<td></td>
<td>All interactions</td>
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<th>Evaluation Factor</th>
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<th>All Interactions</th>
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<td>.001</td>
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<th>Potency Factor</th>
<th>Fan-Non-fan</th>
<th>Color BW</th>
<th>Genre</th>
<th>GenreXColorXGenre</th>
<th>All other interactions</th>
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<td>.001</td>
<td>.05</td>
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<th>Activity Factor</th>
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<th>All Interactions</th>
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<td>n.s.</td>
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<td>.001</td>
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<tr>
<th>Opinion about Colorization</th>
<th>Fan-Non-fan</th>
<th>Color BW</th>
<th>Genre</th>
<th>ColorXGenre</th>
<th>All other Interactions</th>
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<td>n.s.</td>
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<td>.001</td>
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</table>

Subjects who saw colorized films were significantly more likely to place the decade and year of production closer to the present. For example, 72% of those who saw the black and white segments correctly identified the films as originating in the 1930s and 40s, compared to only 52% of those who saw colorized films. In fact, in the color condition 14% felt the films were produced after 1960, compared to only 2% of viewers of black and white segments ($X^2 = 18.69; df = 7, p < .01$).

In reality, the "mean year" of the release of the three films was 1940. Subjects who viewed the black and white films were more accurate in their assessment of the film's year of production (placing the production year at about 1943). However, the colorizing process subtracted about seven years from the perceived age of the film, from 1943 to an estimated production date of 1950.

There was also a tendency for the color versions to be evaluated more positively ($p < .08$) and for the black and white version to be seen as more potent ($p < .06$). Color had little impact on judged activity. There was also a significant main effect on the clear-fuzzy scale ($p < .05$) with color scenes judged as fuzzier than black and white. The familiar-strange rating narrowly missed significance ($p < .07$) with the color version rated more familiar.

Aside from the one mentioned earlier, there were no significant interactions between genre and colorization. Apparently, color is not more beneficial to one genre than another. Each variable exerted its own unique impact.

Surprisingly, being a film fan was not strongly associated with perceptions of or reactions to the colorization process. Fans did not correctly identify the decade or year of production more frequently than did non-fans. They were no more likely than non-fans to name the films or to correctly identify the performers. A similar proportion of fans and non-fans (about 43.5% and 50% respectively) preferred the black and white film they viewed to be

than those who saw the colorized version while the groups seeing the detective segment showed no difference.

Given this lack of interactions, it appears that each of the three variables acts independently. Consequently, the remainder of this section will concentrate on significant main effects.

Turning first to the colorization variable, the most striking effect was that the perceived year of production was affected by colorization in every genre ($p < .001$). No matter the content, the colorized version was perceived as more modern.
colored. A like proportion (79.6% and 75%) correctly recognized the color segment they saw as having been colorized.

Both groups were equally aware of the colorization process (fans: 97.4%; non-fans: 91.5%). In addition, ANOVA results on the evaluative, potency and activity dimensions of the semantic differential scales each failed to reveal either main effects for movie fans or any interactions aside from the one three-way interaction mentioned earlier.

Likewise, no main effects or interactions for the fan variable were found on any of the other scales. In short, film fans and non-fans were basically alike in their attitudes toward colorization.

Discussion

The most striking finding of this study is the confirmation of the first preliminary hypothesis: colorized films were seen as more contemporary than their black and white counterparts. Colorizing does act as a fountain of youth, slicing off about seven years from the perceived age of the film.

Secondly, although not quite reaching statistical significance, there was a tendency for the colorized version of a film to be evaluated more favorably but colorization did not increase the likelihood that viewers would watch the films at home. Apparently, colorization inspires mixed feelings among the audience. Nonetheless, it appears safe to say that there is no overwhelming feeling against colorization in this age group.

Preliminary hypothesis number three was not supported. Color had no discernible impact on the real-unreal rating scale. There was a trend, however, narrowly missing significance, for color segments to be seen as less potent. This finding, coupled with the significant difference in the clear-fuzzy scale, suggests that colorization takes away the sharp edges from an image, blurring it, making it less distinct, if not less real.

Fourthly, the attitudes of film fans toward colorization were not notably different from non-fans.

As a preliminary inquiry into the effects of the colorization process, this study possessed some limitations. First, only three genres were shown to the subjects. Although there were no major genre-colorization interaction effects detected in this study, future experiments might include segments from other genres for comparison. For example, no colorized action-adventure film was available at the time of the study, but several have since been colorized.

Further, the sample represented the narrow age range of young adults. On the one hand, this represents an advantage since these people are in or about to enter the 18-34 demographic group that film and television programmers strive to attract. Programmers can take heart that colorized films do not “turn off” these young consumers. On the other hand, the findings might show a different pattern if older subjects were tested. Individuals who grew up with and came to admire the black and white versions of these films might not look with favor upon their being altered.

FINANCIAL SERVICES ADVERTISING
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a high-priority goal in the investigation of events such as the stock market crash of October 19. Regardless of such considerations, this study has documented further the response of advertisers, as an institution, to a unique event that cost investors billions of dollars in value, sent advertising agencies scrambling to craft fresh, appropriate messages for their clients, and put a Swatch on more than a few wrists.