REVIEW

Television’s Impact on Fantasy Play: A Review of Research

TOM H. A. VAN DER VOORT AND PATTI M. VALKENBURG

Leiden University, Center for Child and Media Studies, P.O. Box 9555, 2300 RB Leiden, The Netherlands

This article reviews the available research literature on television’s influence on fantasy play. Whether television viewing influences children’s fantasy play positively (stimulation hypothesis) or negatively (reduction hypothesis) is examined. There is evidence that television viewing absorbs time that children would otherwise spend in play (displacement). Apart from displacement effects, television’s influence on fantasy play depends on the types of programs a child watches. In exceptional cases, educational programs can enhance fantasy play. Benign, non-violent programs do not affect fantasy play, whereas programs with high levels of violence reduce fantasy play. The authors discuss the empirical support for several different stimulation and reduction hypotheses. © 1994 Academic Press, Inc.

Current theories of play agree that fantasy play can make an important contribution to the cognitive and social development of the child (Piaget, 1972; Singer & Singer, 1990; Vygotsky, 1966). Children who exhibit a great deal of fantasy in their play are better able to concentrate, develop greater empathic ability, and are better able to consider a subject from different angles (Singer, 1982; Shmukler, 1983). They are happier, more self-assured, and more flexible in unfamiliar situations (Singer, 1982). There are indications that a high level of fantasy play in childhood promotes creativity in the long term (Danksy, 1980; Lieberman 1977; Singer & Singer, 1990).

Children get their ideas for fantasy play from incidents in their lives, stories they hear, and the media. In this article we examine the role television plays in the development of fantasy play. By fantasy play we mean play in which the child transcends the constraints of reality by acting “as if.” In fantasy play children pretend that they are someone else, that an object represents something else, and/or that the participants are in a different place and time (James & McCain, 1982). Fantasy play is also referred to as “imaginative play,” “pretend play,” “dramatic play,” and “make-believe play.” We will use these terms interchangeably.

Address reprint requests to Patti M. Valkenburg, P.O. Box 9555, 2300 RB Leiden, The Netherlands. Fax: 3171-273945.
There are contradictory opinions about the influence of television on fantasy play. Some authors believe that television encourages fantasy play. We refer to this view as the stimulation hypothesis. Many others, however, argue that television hinders fantasy play, a position we call the reduction hypothesis.

According to the stimulation hypothesis, television promotes imaginative play by providing a rich source of ideas from which children can draw when engaged in imaginative play. A variant of the stimulation hypothesis proposes that well-known television programs provide children with a common experience and thus stimulate play that is immediately accessible to children familiar with these programs (James & McCain, 1982).

The reduction hypothesis has a larger following than the stimulation hypothesis. Five types of reduction hypotheses are found in the literature. In each, the reduction effect is attributed to a special property of television. Three reduction hypotheses attribute the reduction effect to some structural characteristic of television. According to the other two, only specific types of programs produce a decrease in fantasy play. The reduction hypotheses can be summarized as follows:

*Displacement Hypothesis*

In this view, the reduction effect is a result of the popularity of the medium. Children spend a considerable portion of their free time watching television at the expense of other leisure activities. The hypothesis argues that watching television takes up time, a portion of which would otherwise be spent on fantasy play (Singer & Singer, 1986; Winn, 1985).

*Passivity Hypothesis*

Television is seen as an "easy" medium, requiring little mental effort (Salomon, 1984). With a minimum of effort, the child-viewer consumes fantasies produced by others. This leads to a passive "let you entertain me" attitude that undermines the child's willingness to use his or her own imagination (Singer, Singer, & Rapaczynski, 1984a).

*Rapid Pacing Hypothesis*

This hypothesis attributes the reduction effect to the rapid pace of television programs. The child is confronted with images that must be instantaneously processed, as scenes are presented in rapid succession. Children are thus allowed little time to process the information at their own rate or to reflect on the program content. Advocates of this hypothesis argue that television, and in particular rapidly paced programs, leads to cognitive overload, impulsive thinking, hyperactivity, and shortened attention spans in children (see Anderson, Levin, & Lorch, 1977). As a consequence, children are less inclined to engage in fantasy play.
Arousal Hypothesis

The arousal hypothesis also assumes that television promotes hyperactive and impulsive behavior. However, the hyperactivity is not seen as a consequence of a structural characteristic of television, but is attributed to the arousing quality of action-oriented and violent programs. The arousal produced by these programs fosters a physically active and impulsive behavior orientation which hinders the sequential thought and planning necessary for organizing plots of make-believe games (Singer et al., 1984a).

Anxiety Hypothesis

This hypothesis also argues that violent programs hinder fantasy play. In this hypothesis, the reduction effect is not attributed to the arousal violent programs produce, but to the anxiety reactions they generate. Following Freud (1933), it is assumed that anxiety leads to regression in behavior, which is expressed in a reduction in imaginative play (Noble, 1970, 1973).

Some of the explanatory hypotheses, and in particular the passivity hypothesis, lack an empirical basis. After we have reviewed the findings of the research on television’s influence on fantasy play, we will discuss the validity of each stimulation and reduction hypothesis in the final section.

The present review differs in two respects from earlier reviews (Anderson & Collins, 1988; Singer, 1982; D. G. Singer & Singer, 1981). First, the present review specifically deals with television’s impact on fantasy play, whereas previous reviews also dealt with the influence of television on inner fantasy and creativity. Second, unlike Anderson and Collins (1988), who discussed only a selection of the research, the present review attempts to provide a complete and up-to-date review of the relevant studies. In preparing this review we collected all relevant references from the standard computer-searchable databases in both the United States and Europe, including studies published up to the middle of 1992.

THE RESEARCH

Almost all of the research on the relation between television and fantasy play has been conducted with preschool children, the age group which most frequently engages in imaginative play (Singer & Singer, 1990). The research can be divided into four categories: (1) quasieperimental studies of the influence of television on the amount of time spent in play, (2) qualitative studies of the influence of television on the content of play, (3) correlational studies of the relation between television viewing
and fantasy play, and (4) experimental studies of the influence of program characteristics on fantasy play.

The Influence of Television on the Amount of Time Spent in Play

The displacement hypothesis was testable during the introductory stage of television, when nonviewers and viewers could be compared. Although researchers failed to explore the effect of the arrival of television on the time devoted to imaginative play, three studies did examine the consequences for playtime in general (see Table 1).

Maccoby (1951) investigated whether the amount of time children spent

<table>
<thead>
<tr>
<th>Study</th>
<th>Country</th>
<th>Age</th>
<th>N</th>
<th>Experimental comparison</th>
<th>Playtime measure</th>
<th>Main results</th>
</tr>
</thead>
<tbody>
<tr>
<td>Maccoby (1951)</td>
<td>U.S.A.</td>
<td>3–17</td>
<td>622</td>
<td>Children with and without television</td>
<td>Direct time estimate by mothers</td>
<td>Children with TV play 1.5 h a day less than children without TV</td>
</tr>
<tr>
<td>Schramm, Lyle, &amp; Parker (1961)</td>
<td>Canada</td>
<td>6–7</td>
<td>309</td>
<td>Children in Radiotown and Teletown</td>
<td>Direct time estimate by parents</td>
<td>Teletown children play 0.5 h a day less than Radiotown children</td>
</tr>
<tr>
<td>Murray &amp; Kippax (1978)</td>
<td>Australia</td>
<td>8–12</td>
<td>128</td>
<td>Children in High-TV, Low-TV, and No-TV Town</td>
<td>Direct time estimate by children</td>
<td>Playtime per day: High-TV, 1.81 h; Low-TV, 1.45 h; No-TV, 1.10 h</td>
</tr>
<tr>
<td>Gadberry (1980)</td>
<td>U.S.A.</td>
<td>6</td>
<td>27</td>
<td>Children whose viewing time was restricted and unrestricted</td>
<td>Direct time estimate by parents</td>
<td>No significant differences in fantasy play with cars and dolls</td>
</tr>
</tbody>
</table>
TELEVISION AND FANTASY PLAY

on other leisure activities differed for households with and without television. Children from television households gave up approximately an hour and a half of their daily playtime to the new medium. Schramm, Lyle, and Parker (1961) also found that the arrival of television occurred at the expense of playtime. Children from *Teletown*, where television was available, played a half hour per day less than children in *Radiotown*, where television was not available.

A contradictory result was reported in an Australian study by Murray and Kippax (1978). The study compared the leisure activities of children in *High-TV Town*, a town that had 5 year’s experience with two television channels, *Low-TV Town*, a town with 1 year’s experience with one channel, and *No-TV Town*, a town without television reception. The amount of time children spent playing was found to increase as the availability of television increased. However, this finding is called into question by three methodological weaknesses of the study: (1) the samples are very small; (2) the comparability of the samples is dubious because the ratios of boys to girls in the samples differ considerably; (3) the validity of the measure of time expenditure—direct estimates generated by the children themselves—is questionable, especially for the younger children included in the study (van der Voort & Voojs, 1990). The questionable validity of the time estimates obtained by Murray and Kippax is indicated by the following contradictory finding. Although children from *High-TV Town* reported spending 16 h a week watching television, the amount of time they reported spending on other leisure activities (53.13 h) was nearly equal to the time children from *No-TV Town* reported spending on these activities (55.22 h).

Now that television is an almost ubiquitous phenomenon, research in which viewers are compared to nonviewers is no longer feasible. Still possible, however, are experiments in which the time spent watching television is deliberately reduced. Gadberry (1980) succeeded in finding 27 mothers of 6-year-olds who were willing to cooperate in an experiment in which half of the mothers reduced the viewing time of their children by 50% for 6 weeks, while the other mothers did not interfere. Both before and after the experimental period the mothers were asked to estimate for the current week the amount of time their 6-year-olds had spent on an average weekday in each of nine leisure activities, two of them being car fantasy play and doll fantasy play. No significant pretest–post-test differences between the restricted-TV and unrestricted-TV groups were found for car and doll fantasy play. The study thus suggests that television restriction does not affect the amount of time spent in fantasy play in the week following the experimental period. As shown in a Belgian television-deprivation experiment (De Meyer, Hendriks, & Fauconnier, 1987), however, television restriction may have effects that are limited to the exper-
imental period. In this study, a panel of 20 Flemish families were deprived of their television sets for 3 of 5 research weeks. De Meyer et al. observed changes in leisure activities only during the 3 experimental weeks the participants did without television. In the postexperimental week the participants returned to their former leisure-time habits as established in the preexperimental week.

Conclusion. According to Gadberry's (1980) television-viewing restriction experiment, the amount of time children spend watching television does not affect time spent in fantasy play, at least not in the days immediately following the experimental period. However, two of the three studies of the effect of the introduction of television do suggest that television watching occurs at the expense of playtime in general. It must be noted that only a portion of total playtime is spent on fantasy play. Even preschoolers spend only a third of total playtime in fantasy play (Fein, 1981). However, when total playtime decreases, the time spent in fantasy play is likely to decrease as well, although this was not investigated. Nor was it determined whether the arrival of television specifically affected the play activity of preschool children, the age group most involved in imaginative play. Preschoolers were only one of several age groups represented in Maccoby's (1951) study, which dealt with 3- to 17-year-olds. However, the study did not analyze whether the displacement effect varied for different age groups.

The Influence of Television on the Content of Play

The displacement hypothesis assumes that all the time children spend in front of the television set is lost time as far as play is concerned. A qualitative observation study by Reid and Frazer (1980) brings this assumption into question (see Table 2). Reid and Frazer observed children watching television in their own homes. The study provides a number of anecdotal examples that indicate that children sitting in front of the screen alternate watching television with play based on the program being watched. According to Anderson and Collins (1988), this finding disconfirms the displacement hypothesis. However, Reid and Frazer's study leaves open the question of how much time children spend in play while sitting in front of the set. The displacement hypothesis is proved wrong only if the amount of time spent in play while watching television equals or exceeds the playtime displaced by television viewing.

James and McCain (1982), who observed children's free play in a day-care center, further analyzed the influence of television on the content of play. The study offers a qualitative analysis of so-called television-facilitated play, play which incorporates elements from television programs. It is perhaps better to use the term television-related play, because the presence of television content in play does not necessarily imply that
TABLE 2

<table>
<thead>
<tr>
<th>Study</th>
<th>Age</th>
<th>N</th>
<th>Type of study</th>
<th>Main results</th>
</tr>
</thead>
<tbody>
<tr>
<td>Reid &amp; Frazer (1980)</td>
<td>3–11</td>
<td>20</td>
<td>Qualitative</td>
<td>Television viewing is alternated with play derived from television content</td>
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<tr>
<td></td>
<td></td>
<td></td>
<td>observation study</td>
<td>TV-related play:</td>
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<td></td>
<td></td>
<td></td>
<td></td>
<td>— Involves frequent use of fantasy superheroes</td>
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<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>— Increases between the ages of 3 and 5</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>— Decreases at the ages of 6 and 7</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>— Involves themes similar to those found in non-TV-related play</td>
</tr>
<tr>
<td>James &amp; McCain (1982)</td>
<td>3–7</td>
<td>36</td>
<td>Qualitative</td>
<td>As compared to the pre-TV generation TV generation reported:</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>observation study</td>
<td>— More heroic adventure play</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>— More fantasy heroes instead of real-life heroes</td>
</tr>
</tbody>
</table>

French & Pena (1991) 17–79 100 Retrospective study

Television facilitates play. Children who incorporated television characters in their play used superheroes such as *Batman* and *Wonder Woman* most often. The use of television content in play increased between the ages of 3 and 5 years. This finding was reproduced by a survey study conducted by Lyle and Hoffman (1976) which indicated that 36% of 3-year-olds and 65% of 5-year-olds sometimes “played things they saw on television.” According to James and McCain, the use of television content in play decreased among 6- and 7-year-olds, but children in this age group used television content more often in conversations.

According to James and McCain (1982), boys engaged in television-related play more often than girls did. A similar finding was obtained in a recent German observation study (Barthelmes, Feil, & Furtner-Kallmünzer, 1991) which dealt with media-related play (as opposed to TV-related play). Barthelmes *et al.* found that 77% of media-related play was engaged in by boys. James and McCain observed that boys used television content more often in play involving action and gross motor skills (climbing and running), whereas girls used television content more often in play involving language (singing) and small motor skills (doll play). Some of the observations suggested that content from well-known television programs stimulated play that others could easily join. This
finding led James and McCain to formulate the aforementioned hypothesis that television offers children a common experience which facilitates cooperative play.

According to James and McCain (1982), the themes occurring in television-related games were similar to those found in games not inspired by television. They also claimed that the themes in television-related games were similar to the themes that have been identified in play from the pretelevision era. Thus, television-related play offers only new variations on old themes. However, James and McCain do not indicate how often various themes occurred in television- and nontelevision-related play. It is possible that, due to television, certain themes appear in play more often now than in the pretelevision era.

A study by French and Pena (1991) does suggest that the frequency of play themes has changed since the advent of television. French and Pena interviewed older adults, who had grown up without television, and younger adults, who had grown up with television. Both groups were asked about the games they played as children. The respondents described in essay form two salient episodes of play, one from early childhood (4–6 years) and one from middle childhood (7–9 years). French and Pena found differences only in the early childhood play reported by the two groups. In comparison with the pretelevision generations, the subjects who grew up with television reported more heroic adventure play in the early childhood period. Moreover, the television generation reported more fantasy heroes, as opposed to real-life heroes, in their early childhood play. However, it is uncertain whether the differences in early childhood play found between the pretelevision and television generations can be attributed to the advent of television, because society has changed in other respects as well.

Conclusion. Television content is used in fantasy play both during and after viewing. However, the research leaves three questions unanswered. It has not been established (1) how often children use television elements in their fantasy play; (2) whether television-related play is more or less imaginative than play that is not derived from television; and (3) whether television influences the frequency with which children engage in fantasy play. Preschool children in the television era may engage in heroic adventure play more often than children did before the introduction of television, a finding that deserves further investigation.

Correlational Studies

Five studies examined correlations between television viewing and the quality or frequency of fantasy play (see Table 3). In two studies simple bivariate correlations were established, with no controls for third variables (Monighan, 1986; D. G. Singer & Singer, 1976). Monighan used
TABLE 3
CORRELATIONAL STUDIES ON THE RELATION BETWEEN TELEVISION VIEWINGa AND FANTASY PLAY

<table>
<thead>
<tr>
<th>Study</th>
<th>Age</th>
<th>N</th>
<th>Fantasy-play measure</th>
<th>Control variables</th>
<th>Direction of the relationb</th>
</tr>
</thead>
<tbody>
<tr>
<td>D. G. Singer &amp; Singer (1976)</td>
<td>3–5</td>
<td>70</td>
<td>Ratings of frequency of make-believe elements observed in play</td>
<td>None</td>
<td>0 (Total viewing time) – (Violent programs)</td>
</tr>
<tr>
<td>Shmukler (1981)</td>
<td>3–5</td>
<td>81</td>
<td>Ratings of frequency of make-believe elements observed in play</td>
<td>Sex, age, sibling position, etc.</td>
<td>0 (Total viewing time) + (Nonviolent children's programs) – (Late and possibly violent programs)</td>
</tr>
<tr>
<td>J. L. Singer &amp; Singer (1981)</td>
<td>3–4</td>
<td>141</td>
<td>Ratings of frequency of make-believe elements observed in play</td>
<td>Sex, age, IQ etc.</td>
<td>0 (Total viewing time) – (Action/adventure programs)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Interview about imaginary playmates</td>
<td>Age, IQ, etc.</td>
<td>(Total viewing time; for boys only)</td>
</tr>
<tr>
<td>Singer, Singer, &amp; Rapaczynski (1984a)</td>
<td>3–4</td>
<td>63</td>
<td>Imagination Interview</td>
<td>Parental attitudes and family lifestyle</td>
<td>0 (Total viewing time) + (Fantasy action/adventure programs) – (Realistic action/adventure programs)</td>
</tr>
<tr>
<td></td>
<td>8–9</td>
<td></td>
<td>Block Play</td>
<td>Parental attitudes and family lifestyle</td>
<td>0 (Total viewing time) – (Fantasy action/adventure programs) – (Realistic action/adventure programs)</td>
</tr>
<tr>
<td>Monighan (1986)</td>
<td>3–5</td>
<td>36</td>
<td>Observation of complexity of play</td>
<td>None</td>
<td>0 (Total viewing time)</td>
</tr>
</tbody>
</table>

b "+" Stands for a positive relationship, "–" for a negative relationship, and "0" for no relationship with fantasy play.

Observation to determine the complexity of preschoolers’ play. Singer and Singer established the frequency of imaginative play by observing how often children incorporated in their play elements of time, space, or character not immediately given in the perceptual environment.

Monighan (1986) found no relation between the amount of time spent watching television and the complexity of play. However, this finding may be based on an artifact: there was very little variance in the reported viewing frequency, which precludes the possibility of finding relations with other variables.

D. G. Singer and Singer (1976) also reported no relation between the
frequency of fantasy play and total viewing time. However, the frequency of fantasy play was related to the frequency with which violent programs were watched. Preschool children who exhibited less imaginative play showed a strong preference for violent programs—as did their parents.

The remaining three studies included in Table 3 were better designed: third variables were controlled for, and a valid diary measure of children’s viewing was employed. Shmukler (1981) related South African preschoolers’ fantasy play to their television viewing habits. The imaginativeness of play was assessed through ratings based on observations of children’s spontaneous play. Imaginativeness of play was unrelated to children’s total viewing time. However, imaginativeness of play was related positively to the amount of time spent watching benign, nonviolent children’s programs and negatively to the amount of time spent watching programs broadcast later in the evening (“late viewing”). Some of the programs watched later in the evening were of a violent nature.

J. L. Singer and Singer (1981) assessed the amount of television viewing and fantasy play engaged in by preschoolers on four occasions over a period of 1 year. In addition, interviews were used to establish the extent to which children played with imaginary playmates. Again, no relationship was found between total viewing time and fantasy play. However, children who spent a large amount of time watching action-adventure programs engaged less frequently in fantasy play. Moreover, boys who watched a lot of television were less likely to report that they had an imaginary playmate.

Singer et al. (1984a) followed a group of preschool children over a 5-year period. In the last year of the study two methods were used to estimate the frequency with which children engaged in fantasy play: (1) a questionnaire on children’s favorite games and imaginary playmates (Imagination Interview); (2) ratings based on observations of play sessions with blocks (Block Play Fantasy). The viewing time established in the first year did not contribute to the prediction of either measure of fantasy play. For subsequent measures of viewing time, only the time spent watching action-adventure programs was found to be related to fantasy play. Fantasy play as established in the Imagination Interview was related positively to the amount of time spent watching fantasy action-adventure programs and negatively to the amount of time spent watching realistic action-adventure programs. However, both realistic and fantasy action programs contributed negatively to the prediction of Block Play Fantasy.

Conclusion. Few correlations were found between overall television viewing and the quality or frequency of fantasy play. However, the amount of time spent watching specific types of programs was related to fantasy play. Specifically, a high exposure to adventure programs, violent
programs, and realistic action programs was associated with lower levels of imaginative play. According to one study, high exposure to benign, nonviolent children's programs is associated with higher levels of imaginative play.

**Experimental Studies**

The influence of various program characteristics and program types on fantasy play has been examined in 10 experimental studies. The experiments were carried out in both laboratory and preschool settings. The laboratory experiments were designed to establish the effect of fantasy play produced by short films and television programs, which varied in duration from 6 (Silvern & Williamson, 1987) to 40 min (Anderson et al., 1977). In the field experiments, children were exposed to a series of television programs, ranging from one program per day shown over a 2-week period (J. L. Singer & Singer, 1976; Tower, Singer, Singer, & Biggs, 1979) to 20 films shown over an 8-week period (Friedrich-Cofer, Huston-Stein, McBride Kipnis, Susman, & Clewett, 1979). In all of the experimental studies the frequency with which children engaged in fantasy play was assessed through observation of play sessions.

**Experimental studies with a no-viewing control condition.** In four experimental studies a group that was not shown the television programs or films was used as a control (see Table 4). The presence of a no-viewing condition in the experiment makes it possible to establish whether watching television programs encourages or discourages fantasy play.

To test the anxiety hypothesis, Noble (1970) compared three conditions involving: (a) a 15 min-long war documentary, (b) a nonviolent animated puppet film, and (c) "no film" as a control condition. After the film (or no film) was shown, the constructiveness of play was measured using a five-point scale running from "no play with any toy" (= 0) to "toys used as part of imaginative play" (= 4). Play was less constructive after the war documentary than after the puppet film or in the no film condition, as predicted; this finding held only for middle-class children. Noble interpreted the decrease in constructiveness of play following the war documentary as an expression of regression resulting from the anxiety evoked by the violent scenes in the war film. Noble assumed that the anxiety reactions were stronger among middle-class children because they are more socialized to reject physical aggression than are working-class children. There was no significant difference in imaginative play between the children who watched the puppet film and the children who did not see a film. Apparently, the nonviolent puppet film did not affect imaginative play.

J. L. Singer and Singer (1976) tested the stimulation hypothesis in a field experiment carried out in a day-care center. The experiment sought to establish whether fantasy play was stimulated by watching episodes of
### TABLE 4
Experimental Studies on the Influence of Television on Fantasy Play, With a No-Viewing Condition

<table>
<thead>
<tr>
<th>Study</th>
<th>Age</th>
<th>N</th>
<th>Comparison</th>
<th>Fantasy-play measure</th>
<th>Main results</th>
</tr>
</thead>
<tbody>
<tr>
<td>Noble (1970)</td>
<td>6</td>
<td>28</td>
<td>Three conditions 15 min in length:</td>
<td>Ratings of constructive-ness of play per 30-s interval in 20-min play session</td>
<td>Play is less constructive after war documentary than after puppet film or no film</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>—War documentary</td>
<td></td>
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<td></td>
<td></td>
<td></td>
<td>—Puppet film</td>
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<td></td>
<td></td>
<td></td>
<td>—No film (free play)</td>
<td></td>
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<tr>
<td>J. L. Singer &amp; Singer (1976)</td>
<td>3–4</td>
<td>60</td>
<td>Four conditions; 2 weeks, a half hour each day:</td>
<td>Overall rating of frequency of make-believe elements observed in 10-min play session</td>
<td>Compared with no film, all three experimental treatments result in more fantasy play</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>—Play training</td>
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<td></td>
<td></td>
<td></td>
<td>—Mister Rogers</td>
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<td></td>
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<td></td>
<td>—Mister Rogers guided by an adult</td>
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<td></td>
<td></td>
<td></td>
<td>—No film (normal classroom routine)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Anderson, Levin, &amp; Lorch (1977)</td>
<td>4</td>
<td>72</td>
<td>Three conditions 40 min in length:</td>
<td>Amount of time spent in fantasy play observed in 10-min play session</td>
<td>No significant differences in fantasy play</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>—Sesame Street, rapidly paced</td>
<td></td>
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<tr>
<td></td>
<td></td>
<td></td>
<td>—Sesame Street, slowly paced</td>
<td></td>
<td></td>
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<tr>
<td></td>
<td></td>
<td></td>
<td>—No film (reading aloud by parents)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Huston-Stein et al. (1981)</td>
<td>3–5</td>
<td>66</td>
<td>Programs 8–12 min in length with:</td>
<td>Scoring of presence of imaginative play per 15-s interval in 10-min play session</td>
<td>Fantasy play decreases after program with high action-high violence Fantasy play increases after: —Low action-low violence —No film</td>
</tr>
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<td>—High action-high violence</td>
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<td>—Low action-low violence</td>
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<td>—No film</td>
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*Mister Rogers* in which fantasy play was demonstrated using puppet characters. One group of children was shown a half-hour episode of *Mister Rogers* each day for 2 weeks. A second group was shown the same programs, in the company of an adult who drew attention to details in the program, and who occasionally encouraged children to imitate particular sequences. A third group was given play training by an adult instead of being shown the television programs. Finally, a control group was neither shown the program nor given any training. Fantasy play was observed before and after the experimental treatments. In comparison with the control group, the experimental groups all showed a significant increase in fantasy play between pre- and postexperimental observation periods. However, the differences among the mean scores of the experimental
groups were small, and no pair-wise tests were applied to see if they were significantly different from each other (Anderson & Collins, 1988). An F test we applied on the post-test means of the three groups that received play training, either through television or live, showed no significant differences between the experimental groups' mean post-test scores for fantasy play, $F(2,42) = .53$, ns. The post-test means for the two groups that watched television, with or without training by an adult, were directly comparable, because the pretest means were virtually identical. The difference between the post-test means of these two groups was also not significant, $t(28) = .80$, ns. Hence, the differences among the experimental groups were presumably not significant. The study therefore showed that watching *Mister Rogers*, with or without adult guidance, can stimulate children's imaginative play, as can direct play training.

Anderson *et al.* (1977) tested the validity of the rapid pacing hypothesis using two versions of *Sesame Street*, one of which was very rapidly paced and the other very slowly paced. No significant differences in fantasy play were found between the two versions of *Sesame Street*. Moreover, there were no significant differences in fantasy play between the two experimental groups and the no-viewing control group. Apparently, watching *Sesame Street* neither raised nor lowered children's tendency to engage in fantasy play.

A study by Huston-Stein, Fox, Greer, Watkins, and Whitaker (1981) shed light on the arousal hypothesis. The researchers selected three children's programs that fit three cells of a factorial design: (a) high action–high violence, (b) high action–low violence, and (c) low action–low violence. The fourth logical cell (low action–high violence) remained empty, because no children's programs contained this combination. A no-viewing control group completed the design. The programs shown were 8–12 min in length. The frequency of fantasy play was observed before and after the television programs. The film with high levels of action and violence produced a decrease in fantasy play. Fantasy play remained stable among children who saw the high action–low violence program; fantasy play increased among children who saw the low-action–low violence program, but this was true for the control group as well.

**Conclusion.** The four experiments discussed indicate that television viewing *per se* neither increases nor decreases fantasy play. The studies suggest that it is the kind of programs watched, not the presence or absence of television, that is crucial to fantasy play: (1) fantasy play is decreased by programs with a high level of violence and action (Huston-Stein *et al.*, 1981; Noble, 1970); (2) "benign" programs, such as nonviolent puppet films (Noble, 1970), *Sesame Street* (Anderson *et al.*, 1977), and programs with little action and violence (Huston-Stein *et al.*, 1981) do not affect fantasy play; and (3) children's programs that are specifically
designed to stimulate imaginative play may increase fantasy play (J. L. Singer & Singer, 1976).

*Experimental studies without a no-viewing condition.* The remaining experiments did not incorporate control groups of nonviewers and therefore allow only conclusions on the effect of one program characteristic relative to that of other program characteristics. These experiments are summarized in Table 5.

As a test of the anxiety hypothesis, Noble (1973) showed children short films that featured either realistically filmed aggression (scenes from the Second World War) or stylistically filmed aggression (scenes enacted in medieval times). Two versions of each type of film were shown. In one version the face of the victim of the aggression was seen, whereas the other showed aggression filmed at a distance. Play was least constructive after the films with realistically filmed aggression and the films that showed the face of the victim. Noble assumes that these films evoked the strongest anxiety reactions.

Friedrich-Cofer et al. (1979) examined the conditions under which *Mister Rogers* promotes fantasy play. Twenty episodes of *Mister Rogers* were shown, followed by play sessions with play materials available that were either related (relevant play material) or unrelated to the programs seen (irrelevant play material). Four conditions were compared: (a) neutral, informative films and irrelevant materials; (b) episodes of *Mister Rogers* and irrelevant materials; (c) episodes of *Mister Rogers* and relevant materials; and (d) episodes of *Mister Rogers* and relevant materials, accompanied by teachers especially trained in the use of the program-related materials. Compared to the neutral films, *Mister Rogers* produced a significant increase in imaginative play only when relevant play materials were available in the play sessions (conditions c and d).

Tower et al. (1979) expected that *Mister Rogers* would stimulate fantasy play more than *Sesame Street*, because *Mister Rogers* is slower in pace (rapid pacing hypothesis) and places a stronger emphasis on make-believe play than *Sesame Street*. Over a 2-week period, three groups of preschoolers were exposed daily to episodes of (a) *Mister Rogers*, (b) *Sesame Street*, or (c) a control series of nature films. Contrary to expectations, no significant differences were found in fantasy play. According to the authors, *Mister Rogers* did increase fantasy play among children who were initially least imaginative. However, the authors did not test whether the increase in fantasy play found among the least imaginative children who watched *Mister Rogers* differed significantly from the increases in fantasy play found among the least imaginative children in the two other conditions.

Greer, Potts, Wright, and Huston (1982) also investigated the rapid pacing hypothesis, but in the context of commercials. They compared the
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effects of "rapid" commercials (with a rapid change of scene and character and high action) and "slow" commercials. A second variable was the distribution of the commercials in a television program: dispersed through the program versus clustered at the beginning and end. Once again, pacing had no effect on fantasy play. However, the positioning of commercials did produce an effect: girls engaged in less fantasy play after seeing dispersed commercials than after clustered commercials. No explanation was given as to why program interruptions affected only girls.

Potts, Huston, and Wright (1986) examined the effects of television content (violence) and television format (action level) on children's fantasy play. Eight television programs were selected as stimuli, representing the factorial combinations (a) high action–high violence, (b) high action–low violence, (c) low action–high violence, and (d) low action–low violence. Each of the four Violence × Action cells was represented by one animated cartoon and one "live" film (with actors of flesh and blood). Children's fantasy play was not affected by type of film (animated versus live). Contrary to the findings obtained by Huston-Stein et al. (1981) children's fantasy play was unaffected by the levels of television action and violence. According to Potts et al., the failure to find effects for television action and violence may have resulted from a number of procedural restrictions that were imposed on children's play. Children were given only two toys at a time, and every 4 min an adult interrupted the children's play to present a new set of toys.

Lastly, Silvern and Williamson (1987) compared fantasy play after a 6-min aggressive cartoon (Road Runner) and an aggressive video game of the same length (Space Invaders). No significant difference in fantasy play was found.

Conclusion. The results of the experiments without a no-viewing condition led to some refinements in the conclusions previously drawn from the experiments with a no-viewing condition. The first conclusion was that films with a high level of action and violence can decrease imaginative play. The study by Noble (1973) suggests that this effect is most pronounced for films that depict realistic violence and that show the face of the victim. Potts et al.'s (1986) study indicates that films with a high level of action and violence do not decrease fantasy play in all cases.

A second conclusion was that benign, nonviolent children's programs do not affect fantasy play. The studies by Tower et al. (1979) and Greer et al. (1982) demonstrate that as far as benign programs are concerned, a fast or slow program pace makes no difference for imaginative play—a finding also reported in Anderson et al. (1977).

Finally, the experiments with a no-viewing condition suggested that such programs as Mister Rogers can increase imaginative play. Studies by Tower et al. (1979) and Friedrich-Cofer et al. (1979) only partially support
this conclusion. According to Tower et al., only children who were initially the least imaginative showed an increase in imaginative play. Friedrich-Cofer et al. found an increase in imaginative play after Mister Rogers only when children were provided with program-related play material.

DISCUSSION

In this final section, we discuss the overall results of the four types of research discussed above. We then examine the conceptual rationale and empirical support for each of the explanatory hypotheses.

Overall Results

There is little evidence that television stimulates imaginative play. Experimental research has shown that only a certain type of program encourages fantasy play, namely those children’s programs specifically designed to stimulate imaginative play.

There are stronger indications that television leads to a reduction in fantasy play. Most quasieperimental studies carried out in the early years of television indicate that the introduction of television resulted in a loss of playtime. Correlational studies show that children who watch a great deal of action-adventure programs and programs with realistic violence engage less frequently in fantasy play. These studies do not permit a causal interpretation, but a number of experimental studies indicate that programs with a high level of violence do hinder imaginative play.

Finally, there are indications that “benign,” nonviolent children’s programs do not affect fantasy play. Various experimental studies indicate that nonviolent puppet films, Sesame Street, and programs with low levels of action and violence neither increase nor decrease fantasy play.

In conclusion, the omnipresent television set probably induces children to spend less time on fantasy play. Apart from this displacement effect, the influence of television is primarily dependent on the child’s television diet. Apparently, the potentially negative influences of television on fantasy play can be counteracted by taking two steps: (1) limiting the time children spend watching television, in order to prevent a displacement effect, and (2) stimulating children to select programs that enhance, or at least do not interfere with, fantasy play.

Explanatory Hypotheses

Stimulation hypothesis. According to the stimulation hypothesis, television stimulates children’s fantasy play through its content, that is, by providing a source of ideas from which children can draw when engaged in fantasy play. Observation studies show that children do use television content in fantasy play, both during (Reid & Frazer, 1980) and after viewing (James & McCain, 1982). However, the fact that children incor-
porate elements from television programs in their play does not necessarily mean that television-related play is more imaginative than play that is not derived from television. Nor does it follow that television increases the frequency with which children engage in fantasy play. Experimental research has shown that children’s fantasy play is promoted only by children’s programs that are specifically designed to stimulate imaginative play. Moreover, some of the experiments suggest that the stimulation effect of programs designed to increase fantasy play is limited to children originally low in imagination (Tower et al., 1979) and to play contexts with play materials related to the program seen (Friedrich-Cofer et al., 1979).

A variant of the stimulation hypothesis proposes that the use of elements from well-known television programs makes play accessible to a broader group of children because television offers children a common experience. There is only anecdotal evidence to support this hypothesis (James & McCain, 1982). Although the hypothesis has not been systematically investigated, it seems likely that television, because of its wide use, does offer children a common experience that facilitates cooperative play. However, television may have merely taken over a function that was fulfilled in earlier times by other media such as the cinema and books.

*Displacement hypothesis.* Most of the studies conducted during the introductory stage of television suggest that television viewing displaces a part of the time that pretelevision generations of children spent playing. Unfortunately, it has not been investigated whether television viewing specifically took time from fantasy play. Nor was it examined whether the arrival of television specifically affected the play activity of preschoolers. For elementary school children, research has shown that the arrival of television resulted in a displacement of primarily earlier popular media such as radio, the cinema, and comic books (see Anderson & Collins, 1988, for a review). Because television’s displacement effects have not been investigated for preschoolers, it is unknown which of the leisure-time activities of young children suffered most from the arrival of television. However, in the case of preschoolers it is not very likely that television displaced primarily radio, the cinema, and books, because young children usually lack the capability to process, understand, and use these alternative media independently. Because both play (van Lil, 1989) and fantasy play (Singer & Singer, 1990) occur most frequently among preschoolers, it is possible that for young children television viewing has not displaced primarily involvement with alternative media but play, including fantasy play.

A problem with interpreting displacement claims is that fantasy play and television viewing are not mutually exclusive activities (Anderson & Collins, 1988). The displacement hypothesis holds only if the amount of
time spent in fantasy play while watching television is less than the play-time displaced by television watching. There is only anecdotal evidence that children combine fantasy play with television viewing. Further research should provide quantitative estimates of the amount of time children spend on fantasy play while in front of the television set.

Since the introductory stage of television, no further research on the displacement hypothesis has been carried out, except for Gadberry's (1980) television-viewing restriction experiment. There is a need for panel studies designed to establish whether displacement effects are still to be found. In addition, new television-deprivation studies are called for. These studies should examine not only whether restriction of children's television viewing affects children's play in postexperimental weeks, but also whether children's frequency of fantasy play is altered during the restricted-viewing period.

Passivity hypothesis. The passivity hypothesis lacks an empirical basis because its validity has never been established. Although it is unknown whether the mechanisms proposed by the passivity hypothesis indeed form the foundation of a reduction effect of television on fantasy play, we may examine whether the available evidence gives reason to believe that these mechanisms occur at all. The passivity hypothesis assumes that: (a) children's processing of information conveyed by television requires little mental effort; (b) the low level of mental effort elicited during television viewing leads to a tendency to expend little mental effort in other domains; (c) the child-viewer consumes fantasies produced by others; and (d) as a result of (b) and (c), children's willingness to engage in fantasy play is undermined.

Despite popular stereotypes of children just sitting and staring at the television set, the child-viewer is cognitively far from passive. Even very young children actively screen television offerings for attractiveness and understandability and make an effort to interpret television images in their own terms (Collins, 1982). It does not necessarily follow, however, that the amount of mental effort children invest in processing television programs is large. There are indications that 12-year-olds invest less mental effort in watching television than in reading (Beentjes, 1989; Salomon, 1984). However, because television is more difficult for younger children to comprehend, younger children may invest more mental effort in watching television than older children do (Field & Anderson, 1985).

There is, then, some support for the assumption that watching television requires relatively little mental effort, at least as far as 12-year-olds are concerned. However, it has never been shown that the low level of mental effort required during television viewing leads to a general tendency to expend little mental effort, including a diminished tendency to invest mental effort in fantasy play. Nor is it known whether fantasy play
really requires a level of mental effort that exceeds that required by watching television.

In our opinion, there is little reason to assume that children's willingness to engage in fantasy play is undermined because the child-viewer consumes fantasies produced by others. Children who listen to a story, read a story, or watch a play consume fantasies produced by others as well. Nevertheless, it has never been argued that print stories or theater hinder children's fantasy play.

*Rapid pacing hypothesis.* This view is based on three assumptions: (a) rapidly paced programs allow children little time to process the information at their own rate or to reflect on program content; (b) this leads to cognitive overload, impulsive thinking, hyperactivity, and shortened attention spans in children; and (c) as fantasy play requires children to fix their attention on their play for a longer period (Singer, 1973), children who watch rapidly paced programs engage less frequently in fantasy play.

Of course, rapidly paced programs leave children less room for reflection on program content than slowly paced programs (assumption (a)). Until now, however, there are no indications that a rapid program pace leads to cognitive overload, impulsive thinking, and shortened attention spans (assumption (b)). Anderson *et al.* (1977) found no immediate effect of rapidly paced television on perseverance in puzzle solving and impulsive thinking as measured by the Matching Familiar Figures (MFF) test. Zillmann (1982) suggests that the child's attention may even be fostered by fast-paced television. Zillmann and colleagues observed that the fast-paced interspersion of attention-catching stimuli in educational programs, compared with the slow-paced interspersion of the same materials, resulted in superior information acquisition.

Because there is no evidence of ill effects of fast-paced programs on children's attention span and cognitive style (impulsive thinking), it is understandable that several different experimental studies reported that program pace did not affect fantasy play (Anderson *et al.*, 1977; Greer *et al*., 1982; Tower *et al*., 1979). It should be noted, however, that these experiments used only benign, nonviolent programs (educational programs and commercials). There is a possibility that the rapid pacing hypothesis does hold for other types of programs, e.g., violent programs. Research comparing slow and rapid versions of different types of programs is called for.

*Arousal hypothesis.* The arousal hypothesis assumes that: (a) watching action-oriented and violent programs has arousing effects on children; (b) the arousal produced by these programs leads to restlessness, impulsivity, a shortened attention span, and a lack of persistence; and (c) as a consequence, children engage less frequently in fantasy play.

Although television viewing appears to be generally associated with
relaxation, violent programs can produce intense arousal in children (Zillmann, 1991), a finding that lends support to assumption (a). Assumption (b) is supported by correlational research that showed that the frequency with which children watch violent and/or action-oriented programs is positively related to restlessness in a waiting room (Singer, Singer, & Rapaczynski, 1984b) and impulsivity at school (Anderson & McGuire, 1978). In addition, quasiexperimental studies have demonstrated that watching violent programs may diminish children's tolerance of delay and persistence in free play (Friedrich & Stein, 1973), whereas a reduction of the amount of time children spend watching violent programs has been found to decrease children's impulsivity as measured by the MFF test (Gadberry, 1980). These studies have demonstrated that violent programs can foster a physically and cognitively impulsive behavior orientation. However, it has not been directly investigated whether a heightened level of arousal was responsible for these effects.

Because research does indicate that violent programs can induce an impulsive behavior orientation, it is understandable that both correlational (Shmukler, 1981; D. G. Singer & Singer, 1976; J. L. Singer & Singer, 1981; Singer et al., 1984a) and experimental studies (Huston-Stein et al., 1981; Noble, 1970, 1973) have demonstrated that watching violent programs can adversely affect fantasy play. Again, these studies established that violent programs can hinder fantasy play, but it was not investigated whether the arousal produced by violent programs was responsible for the reduction in fantasy play. In fact, Noble (1970, 1973) proposes an alternative explanation for the reduction effect found for violent programs, attributing it to the anxiety reactions violent programs can evoke. The causal mechanism responsible for the reduction effect of violent programs on fantasy play (arousal versus anxiety) can be detected by further research comparing arousing-frightening with arousing-nonfrightening programs.

Anxiety hypothesis. This hypothesis argues: (a) that watching violent programs generates anxiety reactions in children; (b) that anxiety reactions reduce fantasy play; and (c) as a consequence, violent programs reduce fantasy play.

There is evidence (see Cantor, 1991, for a review) that violent programs can induce intense fright responses in children (assumption (a)). There are also indications (see Fein, 1981, for a review) that high levels of anxiety disrupt fantasy play (assumption (b)). However, assumption (c) has not been directly investigated. As mentioned earlier, research has shown that violent programs do hinder fantasy play, but it is not clear which causal mechanism is responsible for the reduction in fantasy play.

At first sight, the anxiety hypothesis seems to contradict the psychodynamic theory that children use fantasy play to cope with their fears.
(Robinson, 1920; Waelder, 1933). Upon closer inspection, however, the views expressed in the anxiety hypothesis and psychodynamic theory are quite compatible. In agreement with psychodynamic theory, it has been found that the content of children’s play is codetermined by children’s fears (e.g., Gilmore, 1965). It does not follow, however, that anxiety fosters fantasy play. On the contrary, there is ample evidence that high levels of anxiety have a suppressive effect on children’s play (Fein, 1981).

Differential and long-term effects. There is evidence that television’s influence on fantasy play depends on background variables such as sex (Greer et al., 1982; J. L. Singer & Singer, 1981), socioeconomic status (Noble, 1970), and children’s predisposition to engage in imaginative play (Tower et al., 1979). Further research on the explanatory hypotheses should investigate background variables that may moderate the relation between watching television and children’s fantasy play.

The relationship between television viewing and fantasy play has not been examined in longitudinal causal–correlational research, and the experimental studies that have been carried out were designed to detect only short-term effects. Therefore, there is a need for research into the long-term effects of television on children’s fantasy play.

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