

TELEVISION

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Television and its potential for imagination

Television can stimulate imaginative play and it can be a wonderful teacher when it considers the possibilities and prerequisites of children. Many years of research have produced important evidence for this.

Television exerts a powerful influence on the cognitive, social, and emotional development of children. Although videos, and computers are increasing in usage in American homes, television still remains the favoured electronic media among young children (Woodard and Gridina, 2000). The average elementary school-aged child spends about 4 to 5 hours a day watching TV, while pre-school children spend about 2 1/2 to 3 hours per day in front of the set (Comstock and Scharrer, 2001).

As a result of so much television exposure, a question often asked is: "How does television affect a child's imagination?" We define imagination as the capacity to form images in one's mind of absent objects or to maintain thoughts or ideas without necessarily converting those into acts. Children are engaged in imaginative or symbolic play around the age of two, although researchers such as Greta Fein have found evidence of pretend play among 18-month-old toddlers (Fein, 1981). Although Fein offered the following criteria as necessary components for defining symbolic play more than twenty years ago, they still are relevant:

- An activity may be performed in the absence of necessary material or a social context (washing a doll in a pretend tub)
- Activities may not have a logical conclusion (pirates sail away after their boat sinks)
- Inanimate objects may be treated as real (a stuffed animal is offered food)
- An object or gesture may be substituted for another (a stick becomes a doll)
- A child may carry out an activity usually performed by someone else (pretending to be a mail carrier or astronaut)

Our interest in television and its effect on imagination began over thirty years ago when we observed a group of children in a day-care centre "playing" Peter Pan. We thought that the teacher had read the story to the children and now they were just acting it out. We were surprised to learn that the children obtained their material from a television programme they had seen the night before. That incident led to the question we posed at the beginning of this article concerning television's ability to enhance a child's imagination. Until that charming scene in the day-care centre, we had been studying children's play and imagination, but had not considered the possibility that the television variable exerted any influence in a child's life. Our work, soon after, at the Yale University Family Research and Consultation Centre, addressed the question of television and its effects on imagination. Mainly through the use of naturalistic studies, we were to find that television plays a prominent role not only in children's lives, but in the lives of all of us. Unfortunately, many child development specialists who publish in the most prestigious child-oriented journals still do not include television viewing as a variable in their studies, despite the fact that young children are among the heaviest viewers of television today.

Programmes that stimulate imaginative play

In our research, we usually do not present children with programmes to view, but rather have caregivers keep records of what the children actually do watch on a daily basis (Singer and Singer, 1981). We have also used studies where pre-schoolers are exposed to particular programmes such as Mr. Rogers' Neighbourhood or Barney & Friends among other programmes geared for pre-school children; older children are shown programmes, for example, such as Degrassi Junior High, or Power Rangers. Results from many studies we and others have carried out that pertain to imagination suggest, in general, that television programmes, without any mediation, does not stimulate imaginative play or creativity (Singer and Singer, 1976; Singer and Singer, 1981; Singer, Singer and Rapaczynski, 1984; Valkenburg, 2001; Zuckerman, Singer and Singer, 1980). However, we do find that some programmes have the potential to stimulate imagination if there is adult reinforcement of particular elements during, or after the programme is viewed, or if the programme itself is rich in imaginative content (Singer and Singer, 1998b).

When producers offer a child material that is conducive to stimulating imagination, we can see positive results

It is not television per se that causes this reduction of creativity and imaginative play, but the content that is presented. When producers offer a child material that is conducive to stimulating imagination, we can see positive results. For example, we have been analysing the content of Barney & Friends since the programme has been broadcast. At this point we have watched all programmes (about 20 programmes in each series) from the first #100 series to the #700 series that began in the Fall, 2002. Our data from the earlier series until the current programmes that we are now evaluating indicate that Barney & Friends contain many cognitive (including imagination) and pro-social elements in each show. Pre-school children are pre-tested and post-tested on school readiness skills. The experimental groups who watched particular episodes of Barney, and also were given the opportunity for reinforcement of ideas presented on the programme by an adult immediately after the programme, made gains in school readiness skills such as numbers, colours, shapes, and in civility.



The programmes without such reinforcement, or control groups who did not watch these episodes scored lower than the experimental groups as evidenced on post-test scores. When we exposed toddlers (a major segment of the Barney audience) to ten episodes of Barney compared to a control group that did not see these episodes, the experimental group showed more signs of imaginative play in their free play period than did the control group. These toddlers also demonstrated more signs of persistence and co-operation than the controls (Singer and Singer, 1998b).

Reinforcement in our studies of Barney & Friends consisted of simple concepts and materials we had prepared in advance that were based on the content of each programme we showed to the children. Generally the adult reviewed vocabulary words, played a game or carried out an activity with the children that was similar to the game or activity seen on the particular Barney episode they had just watched. The children in the experimental groups, therefore, had the kind of reinforcement that a parent could easily carry out in the home with no expense or complicated preparation. Our research indicates not only the importance of reinforcement after a programme is viewed, but that a key factor in determining whether or not television can stimulate imagination is the presence of a caregiver who co-views with the child during the programme. The adult can explain a concept, define a word, help a child determine the reality and fantasy distinctions, discuss the theme or plot, and even comfort a child if there is something that is anxiety provoking on the screen. We call this parental mediation, and feel that it is an extremely



important component in a pre-schooler's and even in a young school-aged child's life.

Unfortunately, many children watch TV alone and parents tend to use TV as a babysitter. When a caregiver interacts with a child, we see much learning of new words as was found in a study of Sesame Street by Dafna Lemish and Mabel Rice (1986). In a more recent study Bickham, Wright and Huston (2001) indicate that children who watched educational programmes at pre-school ages two and three had higher scores at age five on measures of language, maths and school readiness. On the other hand, commercial cartoons and adult programmes were found by these researchers to be detrimental to children's academic future.

The study of pre-schoolers' imagination

One way that we study the imagination of pre-schoolers is through direct observation. Research assistants are trained in our scoring procedures using video tapes of children (who are not in our studies), or with written protocols of children's play episodes that encompass many verbatim statements. These vignettes are then scored by raters until good agreement is reached. Generally, our reliability is about .80. Once we have trained these observers they rate children in a particular study at least two times, for ten minutes each time, over a period of two weeks in some studies. In other instances, observations are made periodically over a year's time. Ratings are generally correlated with other measures of children's imagination such as questionnaires, Barron Inkblots (a projective test using ambiguous pictures in order to obtain scores that yield a score of imagination) and actual controlled play situations where segments of the play can be scored (see Singer and Singer, 1981 and Singer and Singer, 1998b for details concerning various measures of imagination).

In order to determine the effect of TV on imagination or creativity, in most of our studies we compare heavy TV viewers (three or more hours per day), with light TV viewers (one hour or less per day), because we cannot find large enough samples of children who do not watch any television. Research with a sample of non-TV viewers was carried out, however, in one rare study. Television had been introduced into a town (No-Tel), where there had been no access to television because of the mountainous terrain. The researchers were able to compare the effects of TV on this town's populace compared to a town that had access to one TV channel (Uni-Tel) and to a town that had access to many channels (Multi-Tel). Upon introduction of TV to the No-Tel town, the children's creativity scores decreased (Harrison and Williams, 1986).

It is possible that viewing of television with its ready made pictures interfered with a child's own capacity for imagery production.

Pacing, repetition, and camera work for young viewers

Many of the educational gains ascribed to television come from the educational programmes that are either on Public Broadcasting Service (PBS) or on particular cable channels. Blues' Clues, for example, is a programme on Nickelodeon that has many of the elements that I consider essential for quality programming for pre-schoolers. Pacing of programmes for this age group needs to be at a speed that enables a young child to process the information. Educators acknowledge that parents, other caregivers, and teachers of young children need to speak slowly to children if they want a child to follow instructions or to learn something new. Having a live host or other children on a programme is important for young viewers. Young children identify with the host or with the children on the show and are apt to model the positive behaviours demonstrated. Animation, and puppets of course, are appealing to children; in terms of imagination, there are many possibilities of fanciful stories when these are used. But we have evidence that there is a psychological attachment to adults when they are an integral part of the show as in Blue's Clues, Mr. Rogers' Neighborhood, or Sesame Street. Adults certainly identify with the characters they see on TV. Witness the popularity of Raymond or Friends in the United States.

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Repetition is also important. As adults, we get the sense of a story when we hear it the first time, but young children need the repetition in order to encode the information. This is one reason why children do not tire of hearing a story read to them time and time again. They may grasp some of the ideas the first time they hear the story, but hearing it again allows them to gain more information. And of course, it feels good when a child knows what to expect and what the story outcome is. This gives a child a feeling of mastery or efficacy.

We also believe that there should be one theme in a television programme in a half hour show. There, of course, can be variations on the theme to prevent boredom. A good story (not unlike a good book) that contains a beginning, middle and ending helps a child to best process the material.

In addition, camera work must be carefully planned so that a child understands that when an object is presented, he/she is aware of the size of the object as it would appear in context. Filming an animal, for example, that occupies the entire screen, with no other objects around it that are familiar to a child, may distort and exaggerate the size of the animal so that it may loom large and frightening. I remember the evening when our then four-year-old watched *The Nutcracker* ballet on television with us. When the mouse appeared on the screen with his long teeth and large whiskers, our child ran from the room screaming, and in tears. He and we were not prepared for this zoom shot that made the mouse a menacing creature.

Programmes for pre-school children should be geared for their age in terms of cognitive and social skills. Clear distinctions must be made between reality and fantasy. Fred Rogers does this very well on his programme. Children enter a segment of a make-believe world through use of the trolley car as a device to take them there, Mr. Rogers is always ready, when the trolley car returns, to help clarify and to explain anything that he believes might be confusing to his young audience.

If a writer wants to use words or concepts that are beyond the young child's level of comprehension, these need to be defined in a phrase following the use of the word or concept. If a word such as "gigantic" is used, the character might say, "The animal is gigantic, very large." This can be done quite naturally and offers the child a new word with an explanation right there. Writers must be careful in their use of metaphors. We remember a child who thought that "blackmail" meant black envelopes. When camera effects are used to enhance a story for pre-schoolers, they must be carried out with caution and in such a way that a child understands that these events are not real. The use of special effects that may add some fantasy or imaginative elements to a programme such as slow motion, fast motion, dissolves and fades, or a character leaping up in the air, or disappearing may be interesting to a producer, but may leave a child confused by what is happening to the character or to the distorted picture on the screen.

The value of TV curricula

We have tried to explain many of the effects in our various curricula prepared for different ages of children including kindergartners. Research has demonstrated that when a child is taught how some of the effects on TV take place, the child becomes an intelligent consumer of television and hopefully will not try to imitate some of the more daring or unsafe events shown on TV (Brown, 2001; Singer and Singer, 1998a). Many of the suggestions above also may pertain to elementary-school-aged children. The content may change in terms of stories that contain more conflict or with sub-plots and secondary themes included. Basically, even though children are older, many of them do get confused about the use of various camera shots and the use of flashbacks or other devices to deal with issues of time. For this reason, we suggest that elementary-school-aged children and even older children should be exposed to curricula that teach them how to process the material on TV and how to deconstruct ideas in stories as well as in commercials.

Stories should involve the audience through material demanding the viewer's intellectual interaction

In terms of imagination, we would like to see stories that can involve the audience through presentation of material that demands intellectual interaction on the part of the viewer. An example of such a programme is *Ghost Writers*, where not only do the children on the programme search for clues to solve a particular dilemma, but the audience, in effect, is also trying to make sense of the clues on the

programme. Blue's Clues does this very well for pre-schoolers. Asking questions, before a character gives the answer, or a character thinking out loud also stimulates the viewer to think and to try and come up with a solution. In addition to dramatic shows that include imaginative elements, we also would like to see more programmes that deal with art, music and dance for young children in order to encourage their own creativity and imagination.

Newer programmes on PBS that address social and emotional issues rather than imagination specifically, are Dragon Tales and Teletubbies. I am not aware of empirical studies that deal with imagination on either of these programmes, although these programmes may indeed be affecting a child's imagination (TelevIZion, 1999; Dragon Tales, 2002). I also would like to see more research carried out on the current line-up on PBS before we pass judgement about the effects of TV on children's development of imagination and creativity. Sesame Street for example, despite its popularity and its significant positive impact on children's social and emotional development, is not a programme that was originally conceived to enhance children's imagination (Fisch and Truglio, 2002). It is a programme designed primarily to help children learn cognitive skills needed for school readiness.

Educational programming must be balanced with entertainment

More than ten years ago, in "Readiness to Learn: A Mandate for the Nation" (Boyer, 1991), recommendations were made concerning the potential power of television as a teacher. Ernest Boyer suggested that we design television programmes that could convey to young children the skills needed for entrance into school. Educational programming, however, must be balanced with entertainment. The suggestions made above for children's programmes should be considered when programmes are still in the planning stages of development.

I remain optimistic that television can be a wonderful teacher, and used with discretion it offers us a "window on the world". Indeed, the television programmes that are selected from countries around the world and are viewed during presentations by Prix Jeunesse (Kleeman, 2001) suggest a myriad of possibilities for encouraging the imaginations of young people, if only all producers and writers would let their own imaginations soar.

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