What Makes Preschoolers Listen to Narrative Audio Tapes?

Peter Vorderer, Saskia Böcking, Christoph Klimmt and Ute Ritterfeld

Abstract. Most communication studies on children and media have focused solely on television. Other popular media products such as narrative audio tapes have been neglected. The present article addresses factors that influence preschoolers’ selective exposure to these tapes. In line with past research, the emotional attractiveness of a story’s protagonist and some formal design elements of the product are regarded as determinants of children’s frequency and persistence of using a given tape. An experimental diary study with 79 preschoolers revealed that both factors do in fact influence children’s usage of the tape. The resulting implications for fundamental and applied research on children and media are discussed.

Key words: children and media, entertainment, audio tapes, selective exposure

Children are probably the one target group that has attracted the most attention within audience and media effects research. In particular, the use and impact of television (e.g., Bryant & Bryant, 2001) and, more recently, of so-called ‘new media’ such as the internet (Valkenburg & VanAvermaet, 2001) and video games (Calvert, Jordan & Cocking, 2002), have been of great interest to communication researchers around the world. One area of research within children’s media use and effects focuses on preschoolers. However, here too research focuses on audiovisual media (Crawley, Anderson, Wilder, Williams & Santomero, 1999; Crawley et al., 2002; Huston, Wright, Marquis & Green, 1999; Sell, Ray & Lovelace, 1995; Truglio, Murphy, Oppenheimer, Huston & Wright, 1996; Wright, Huston, Murphy, St.Peters, Pinon, Scantlin & Kotler, 2001); other media are rarely taken into account. Whereas some scholars continue to investigate reading or picture books (e.g., Sulzby, 1985; Whitehurst, Falco, Lonigan & Fischel, 1988), preschoolers’ use of audiobooks has been neglected almost entirely.

Nevertheless, user studies demonstrate that the popularity of narrative audio tapes among preschoolers is almost equal to that of television or picture books. Various investigations confirm that audiobooks are important as one of the three most popular media for this audience (Rideout, 2003; Woodward & Grindina, 2000; Grüniger & Lindemann, 2000). The relevance of audiobooks for 4-to-6-year-olds emerges even more clearly if one examines the types of media available in children’s homes and bedrooms. Almost every household in the US owns a CD or tape player, about 40% of American children and half of all German children have a player in their bedroom, and one-third of all youngsters even know how to use CD or tape players by themselves (Feierabend & Klingler, 2003; Rideout et al., 2003). Investigations that distinguish between CD and cassette players actually report that four out of five preschoolers know how to use a cassette player properly (Böcking, Klimmt & Vorderer, 2004). In addition, audio tapes have a positive public image similar to that of picture books. Most parents regard them not only as harmless, but potentially beneficial to the development of their children’s listening skills and imagination. Whereas their television use is often controlled by parents, preschoolers are usually allowed to decide independently about the selection and persistence of exposure to audio books (Vorderer, Ritterfeld & Klimmt, 2001; Ritterfeld, Klimmt, Vorderer & Steinhilper, 2005).

For these reasons, narrative audio tapes are a key component of preschoolers’ contemporary media menu. Very few studies, however, have been conducted which closely...
consider the selection and reception processes of these tapes. In particular, nothing to date is known about what makes preschoolers turn to one specific media offering again and again, as it is known not only from their use of audiotapes but from videos as well (Mares, 1998). The present study aims to analyse these processes of replaying audiotapes by linking repeated use with the concept of wishful identification (Duck, 1995; Feilitzen & Linné, 1975; Hoffner, 1996). Moreover, entertaining effects of formal features are taken into account.

Repetition and Rerun of Media Content

Repetition is a core characteristic of preschooler’s media usage (Mares, 1998). Several studies dealing with television (Crawley et al., 1999; Sell et al., 1995) or repeated reading (Beaver, 1982; Martinez & Roser, 1985; Sulzby, 1985) suggest that one reason for children’s repeat usage of these media is the increasing comprehension of the content which results from repetition. Following this tradition, most of the studies analyzing preschoolers’ media use focus on aspects of attention and comprehension, such as the amount of visual and/or aural attention dedicated to the content, verbal and nonverbal interactions, as well as inferences and recall (see, for an overview, Bickham, Wright & Huston, 2001). Although the focus here is not repetitive use but rather the effects of single formal features appearing after single exposure, these investigations shed some light on the question of why preschoolers turn to one and the same tape again and again. We will return to the influence of formal factors on children’s media use below.

As far as we know, with the exception of Crawley et al. (1999) there are no studies dealing with preschoolers’ repetitive media consumption. However, repetition was not voluntary in this investigation, i.e., the subjects were not able to select programs other than the one investigated. Moreover, the authors focused on the effects of episode repetition and not on the selection processes. Thus, it seems to be fruitful to review the research done in the field of repetition with adults. However, due to the characteristics of an audiotape – the content is always the same and the tape is available at any time – only those studies devoted to repeated exposure and rerun watching (Furno-Lamude & Anderson, 1992; Furno-Lamude & Lamude, 1992; Tannenbaum, 1985) are relevant to the present research.

Although there are investigations examining the cultural dimension of reruns (e.g., Weispfenning, 2003), others focus on a uses-and-gratification perspective. To explain why repeated exposure is observed all over the world, Tannenbaum (1985) for example, provides empirical evidence that viewers watched one and the same episode of a situation comedy twice within the period of a few days because they knew they were obtaining a ‘safe’ form of entertainment by choosing to watch the familiar episode. Furno-Lamude and Anderson (1992) report that subjects use reruns mainly due to nostalgic and recall reasons. In addition, according to a factor analysis conducted within this investigation, the factor ‘engagement’, which consists of items such as entertaining, liking, interesting, better, enjoyable, thrilling and amusing, accounted for 25% of the variance of rerun viewing, but only about 10% of first-run viewing – thus the entertainment value of the program is one important aspect of repeated exposure. This is confirmed by two studies reporting the predominance of situation comedy and drama in people’s watching reruns of television series (Furno-Lamude & Lamude, 1992). In conclusion, not only entertainment but also familiarity with a program seems to be important for rerunning media content.

Factors Influencing Preschoolers’ Exposure to Narrative Audio Tapes

What makes preschoolers turn to one particular media offering again and again? Furthermore, what causes them to ignore alternative offers after only one use or without having used them at all? Results of repetition studies suggest that, as for adults, one important factor for repetition use in preschoolers is entertainment. Examining the contents of different media used by preschoolers, it becomes clear that entertainment is one of the most important aspects underlying their choices. Most – if not all – media offerings designed for preschoolers in some way intend to entertain their young audience and are chosen for this very capability (e.g., Huston et al., 1999; Wright et al., 2001).

From this perspective, the entertainment capability of media offerings appears to be an important determinant of preschoolers’ selective exposure. But what makes media offerings entertaining to preschoolers? Although the notion of media entertainment has been discussed in communication research and media psychology more frequently in recent years (Bosshart & Macconi, 1998; Vorderer, 2003; Zillmann & Vorderer, 2000), a commonly accepted definition does not exist yet. However, certain characteristics of media offerings that influence the degree to which their reception is experienced as entertaining by their audiences have been identified in theoretical contributions and empirical studies. Most of these conceptualisations stress the importance of media characters or formal features of a media offering.

Affective Reactions to Media Characters

Zillmann (1996) has proposed Affective Disposition-Theory, which states that the emotional commitment of the audience towards the protagonist of the story is the key factor influencing the entertainment experience of drama users. These emotional commitments are based on moral judgments of the character’s actions. Viewers observe the feelings of the protagonist empathically (Zillmann, 1991), and consequently, hopes for a positive outcome and fears
of a negative outcome for the likable characters emerge. If the likeable characters face a merited positive ending to an episode, viewers experience enjoyment. Negative outcomes, in contrast, are regarded as morally inappropriate and cause experiences of sadness and dissatisfaction. All these emotions contribute to the development of the specific entertainment experience.

Hoffner (1996) has shown that children do not base their emotional attachment to media characters on moral judgments alone. Other features, such as beauty, humor, and strength, can also increase the affective attractiveness and therewith liking of protagonists for children. Media characters allow young viewers to project their own wishes onto them: Children frequently imagine that they are the admirable character they watch (or have watched), thus compensating for daily life experiences of powerlessness and lack of independence. Hoffner calls this type of character-based media reception “wishful identification” (p. 389; see also, Duck, 1995; Feilitzen & Linné, 1975). Whereas identification processes are more characteristic of realistic programming (Feilitzen & Linné, 1975), according to Duck (1990) wishful identification appears rather with fictional or fantasy programs than with real-life figures. Even children’s interest in and identification with animals has been documented (e.g., Johansson, 1961, as cited by Feilitzen & Linné, 1975), with personification of animals fostering identification as well. In this context, Kagan (1958) suggests that especially younger children are subject to identification influences, which is confirmed by Duck and Noble (1988). However, Duck (1995) points out that the decisive characteristic of engagement with media figures is not the interaction with them but rather the emotions a child develops when watching or listening to them. As the term “wishful identification” implies such feelings are positive in nature, i.e., when experiencing wishful identification the child necessarily likes the character he or she turns to. In turn, due to biological predispositions for caution, liking or – in more general terms – positive evaluations are assumed to be closely linked to familiarity (Winkielman, Schwarz, Fazendeiro & Reber, 2003). Other scholars (Truglio et al., 1996) stress the importance of children’s involvement with the content of the media offering for media usage.

A third theoretical approach that emphasises the benefits of media characters in producing entertainment experiences is the concept of Parasocial Interaction (Horton & Wohl, 1956). In a limited form, media users seem to participate in the social situations that are established by the characters of a media offering. Watching television or listening to the radio is therefore similar to social encounters in real life. Consequently, the actual experience of entertainment or enjoyment depends on features of the ‘persona’ (that is, the people on the screen), the characteristics of the media users and of the context of the program (Hartmann, Schramm & Klimmt, 2004). Moreover, parasocial interactions may lead to an emotional commitment to media characters – Giles (2002) calls it affinity or liking – that persists even after the actual reception process. Such parasocial relationships manifest, for example, in character-related cognitions and habitualisations of selective exposure (Perse & Rubin, 1989; Rubin, Perse & Powell, 1985).

Since various theoretical perspectives developed by communication researchers consistently stress the importance of characters that are emotionally attractive to audiences in general and specifically to children, it is hypothesised that the emotional attractiveness of the protagonist has a central impact on preschoolers’ entertainment experiences and consequently, on their media use. The characteristics and actions of the protagonist, which are central to his/her emotional attractiveness and therewith whether children like him/her, are elements of the narrative of the media offering. This determinant of entertainment experiences and repeated exposure could therefore be regarded as a content factor.

Formal Features

Obviously, factors related to the form of the media offering are also important for enjoyment to occur. It has repeatedly been found in studies on children’s media use that formal aspects of a media offering are important for children’s attention to and processing of these offers (see, for an overview, Bickham et al., 2001). Rice, Huston, and Wright (1983) report the importance of auditory features such as lively music, sound effects, children’s voices, peculiar voices, and frequent changes of speaker for children’s attention to television programs (see also Bryant, Zillmann & Brown, 1983; Huston & Wright, 1983).

We regard these formal characteristics as important for children’s entertainment experiences. For only when attention is evoked can children process and enjoy the program, so that attention and entertainment influence each other. However, formal features are not only important for causing immediate attention, but also for selective exposure. For example, children tend to prefer music as a part of the narrative on audiotapes (Vorderer, Klimmt & Liebetruth, 2002), they prefer humorous educational programs to non-humorous ones (Wakshlag, Day & Zillmann, 1981) as well as programs with fast, appealing background music to no-music control programs or programs with unappealing background music of slow tempo (Wakshlag, Reitz & Zillmann, 1982).

Following the results of Wakshlag et al. (1982) and linking them to the auditoriy features mentioned by Rice et al. (1983), it has to be assumed that similar to formal features of television programs, design elements of audio cassettes may affect attention and thus enjoyment, too. Although the impact of media form on the entertainment experience of listeners has often been assumed, empirical evidence for this assumption is scarce. However, initial empirical findings (Ritterfeld et al., 2005) are in line with non-systematic observations, i.e., that an audio-taped story which features distinct character voices, sound effects and music will be judged as more enjoyable by young listeners than the same story produced without any
of these components. Studies on the enjoyment of music support this position (cf. Machlis & Forney, 1990; see also Knobloch & Zillmann, 2002).

Consequently, we hypothesise that preschoolers are entertained by narrative audio cassettes because of two major factors. One is the emotional attractiveness of the characters involved in the story, and the second is the formal design that features interesting and/or funny elements such as different voices, sound effects, and music. These entertainment capabilities should – according to our assumptions – affect the frequency and persistence of preschoolers’ usage of narrative audio cassettes. Two hypotheses were derived from the theoretical assumptions explicated above.

**H1.** Preschoolers will listen to a narrative audio tape which features an emotionally attractive protagonist more frequently and for a longer overall amount of time than to a tape which does not feature an attractive protagonist.

**H2.** Preschoolers will listen to a narrative audio tape which features entertaining formal design elements such as different voices, music, and sound effects more frequently and for a longer period of time than to a tape which does not contain such elements.

An experimental diary study lasting one week and using a 2 × 2-design was conducted to test the hypotheses.

**Method**

**Sample**

Participating families were recruited through cooperation with various preschools in Northern and Southern Germany. Furthermore, a newspaper article was published in these areas which invited parents of preschoolers to call in and participate in the investigation. Participants were offered 50 Euro and a small gift for the children. Parents were told that the study was dealing with how preschoolers use media in everyday life, especially if they listen to a special tape the parents would receive from the research team. Parents who were interested in participating were informed about the general procedure of the study and the task of filling in an activity diary for their child. The resulting sample of children was 42 boys (52.5%) and 37 girls (47.5%). On average, the children were three years, nine months old (SD = six months).

**Design**

To test the hypotheses, a 2 × 2-experimental design was realized. A special narrative audio tape was produced to function as stimulus. The 15-minute narrative was based on two picture books (Iguchi, 1986; Moser, 1985) and told the story of a little elephant, “Pupunga”, who gets lost in the African savannah and encounters various friendly animals before his/her mother finally finds him/her (the gender of the protagonist was not specified in order to make the story equally appealing to both girls and boys). To assess the impact of the emotional attractiveness of the protagonist and the formal design elements on preschoolers’ media usage, the stimulus material was experimentally manipulated.

**Experimental manipulation of formal design elements**

Two versions of the Pupunga tape were produced (V1 feature lean, V2 feature rich). They differed systematically in the number of formal design elements utilised. V1 included a musical theme at the beginning and at the end of the story, but did not include any sound effects or musical pieces during the story. In addition, only one narrator told the story and performed the parts spoken by the different characters. He spoke at a relatively slow pace. In contrast, V2 featured the same music at the start and end of the tape, but contained numerous sound effects and additional music during the narration (for example, the sound of splashing water when the little elephant fell into a river, or the snoring of a sleeping elephant). Additionally, all characters had distinguishable voices (with the protagonist being spoken by a child), and the narrator told the story in a more ‘dynamic’ style. Since it was our aim to elicit higher entertainment and the simultaneous variation of all these features has been shown to be judged as more enjoyable by young listeners than the same story produced without any of these components (Ritterfeld et al., 2005), we varied these features simultaneously in order to guarantee a higher level of entertainment. The manipulation did not affect the narrative content or the wording of the story.

**Experimental manipulation of the emotional attractiveness of the protagonist**

The second factor that had to be manipulated experimentally was the emotional attractiveness of the protagonist. A systematic variation of this variable would have required profound changes in the story line (for example, portraying the protagonist as boring and cowardly in one version and funny and courageous in the other version), and also in the wording of the narrative. However, portraying the protagonist as cowardly might cause fear in children and thus, due to the different content features (although rendering exposure to the tape less attractive) not allow for a comparison with the emotionally attractive description. Changes of wording, on the other hand, could cause confounding effects with other story-related variables such as length. Therefore, the emotional attractiveness of the character was not manipulated by changing elements of the story. Instead, children who were expected to experience a highly attractive protagonist received additional objects that were comparable to merchandising ‘tie-in’ products: Three days prior to participating in the experiment, the parents of the children were given a stuf-
fed animal and were asked to give it to their children as Pupunga, along with a coloring book that contained various pictures of the toy. It was hoped that these children would develop an affective commitment or relationship to Pupunga by playing and snuggling with the toy and coloring-in the elephant’s images. This assumption is in line with Duck (1995) who points out that the decisive characteristics of engagement with media figures are the feelings a child develops when dealing with them. Children who were expected to develop a weak emotional relationship to the protagonist did not receive any materials before participating in the experiment.

Strictly speaking, this strategy of realising differing degrees of emotional attractiveness varies familiarity with the protagonist rather than emotional attractiveness. Nevertheless we regard this manipulation as useful and valid, because (1) according to the mere exposure effect (see Zajonc, 1968), familiarity increases the probability of sympathy, and (2) as stated above, audio tapes are frequently part of a series of several stories about the same protagonist, who is therefore familiar to listeners before their first exposure to a new tape; our variation is thus sufficient in external validity.

A treatment check for the experimental variation of the protagonist’s emotional attractiveness was conducted after the one-week diary period. Parents answered a three item scale on their perception of their child’s emotional commitment to Pupunga (e.g., „Pupunga has become somewhat of a good friend of my child“). The items had to be answered on a six-point scale that ranged from 1 (I completely disagree) to 6 (I completely agree). They yielded a Cronbach’s alpha of .88, indicating a sufficient reliability of the scale. For the treatment check the three items were averaged ($M = 3.39, SD = 1.61$). According to the treatment check, children who received the Pupunga toy along with the tape developed a stronger emotional commitment to the story’s protagonist ($M = 4.33, SD = 1.20$) than the children who did not receive the stuffed animal ($M = 2.51, SD = 1.46$), $t(77) = 6.05$, $p < .01$.

**Randomised assignment to the experimental conditions**

The experimental stimulus was varied according to a $2 \times 2$ design. The randomized assignment of children to experimental conditions had to be restricted in order to avoid having children who received a Pupunga toy attend the same preschool class as children who did not receive the toy. As close contact between the parents of children who attend the same class was assumed, parents were to be prevented from wondering why some children received a toy whereas some did not. Therefore, regarding the emotional attractiveness of the protagonist, children from the same preschool class were assigned to the same experimental condition, thus assigning only the preschool classes randomly. Altogether, 11 different preschool groups participated in the investigation, six of them were assigned to the condition of high emotional attractiveness, five to the condition of low emotional attractiveness. Because of this limited assignment to the experimental conditions, small differences in case numbers (between $n = 18$ and $n = 23$) occurred in the four experimental conditions.

**Measurement of Subjects’ Usage of the Tape**

The dependent variables – frequency and persistence in children’s tape use – were assessed by using a diary. This way, preschoolers’ tape usage could be observed within a natural setting. Parents of preschoolers were asked to maintain a diary documenting their child’s activities over the period of one week. Following Schiffer, Ennemoser, and Schneider (2002), the children’s activities were noted in 15-minute-timeslots, beginning at 6 in the morning and ending at 10 in the evening. For each timeslot, the children’s parents noted the type of activity according to a list of definitions such as “listening to music tape”, “listening to Pupunga tape”, “watching TV”, “attending kindergarten” or “being in transit”. Additionally, if the main activity was not media usage, the parents noted the types of media offerings running in the background (for example, whether the tape was on while riding in a car). Thus, the diary provided a profile of the preschooler’s primary and secondary (background) media use.

The units of measurement for the diary data were not minutes, but number of blocks of 15-minute time intervals (TI). A transformation into minute numbers would provide only an illusion of greater precision, because parents filled in the longest lasting activity of each TI. If “listening to the Pupunga tape” was noted for a TI, this does not necessarily mean that the child listened to the story exactly for 15 minutes. The child may have listened for ten minutes and have done something else for the remaining five minutes of the according TI. For this reason, we report all diary data in TIs.

Some diary data had to be dropped, because two children were sick during some days of their diary period and displayed systematically different behaviors (and media usage) compared to normal days, and because several other families had filled in fewer than seven days of their diary periods. These missing days and ‘sick days’ were excluded from further analysis. Altogether, the amount of missing data is 1.08% of the whole sample.

**Procedure**

After parental agreement to take part in the investigation, a collaborator visited the family at home and instructed...
the parents (most often the mother) how to fill in the diary. For training purposes, the parents filled in the relevant events on the day of the collaborator’s visit. By discussing any problems that had emerged (i.e., forgetting the child’s activities in certain time periods, incorrect use of certain activity codes), parents were trained for the careful work with the diary. After the introduction of the diary, parents filled in a general questionnaire on demographics, received the audio tape and, if the subject belonged to the experimental groups that were intended to experience the story’s protagonist as emotionally attractive, the Pupunga toy and the coloring book. They were asked (1) to give the stuffed animal and the coloring book to their child ‘like a normal gift’, (2) to introduce the stuffed elephant to their child as a good friend who wants to spend all of his/her time together with the child, and (3) to hand out the tape on the morning of the third day after the visit (which would also be the first day of the diary period). The starting day of the measurement period was varied across the sample in order to avoid systematic effects. On the second day of the diary period, parents were called and asked whether they had any problems filling out the diary. The additional contact was also intended to motivate the parents to maintain the diary attentively throughout the day. After seven days, the collaborator visited the family again, checked the diary for completeness, and resolved any problems with the diary. Finally, parents were thanked and given 50 Euro. The child was allowed to keep the tape (and, in the relevant cases, the Pupunga toy). Since no cover story had been given prior to the study, parents were not given an immediate explanation about the purpose of the study. However, a letter with key results of the investigation was sent to all participating families several months later.

Results

Subject’s Overall Use of the Pupunga Tape

Across the experimental conditions, the Pupunga tape was used for an average of 1.46 TIs per day ($SD = 1.03$). Primary (exclusive) exposure amounted to 0.80 TIs ($SD = 0.73$), secondary exposure – that is, the tape was playing in the background while the child engaged in another main activity such as painting – amounted to an additional 0.66 TIs ($SD = 0.75$). Gender differences were not observed for primary or secondary usage. Moreover, exposure to the tape did not vary significantly between normal weekdays and Saturdays/Sundays. During average days, tape usage was almost equally distributed across the whole day; small peaks of exposure were observed in the morning hours and at noon. Table 1 shows the amount of time children spent with the Pupunga tape in comparison to other activities.

### Table 1. Amount of time children spent with different activities (in 15-min-TIs; $N = 79$)

<table>
<thead>
<tr>
<th>Activity</th>
<th>$M$</th>
<th>$SD$</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Media activities</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Watching TV/ video</td>
<td>2.66</td>
<td>2.57</td>
</tr>
<tr>
<td>Reading books</td>
<td>1.73</td>
<td>1.22</td>
</tr>
<tr>
<td>Listening to Pupunga tape</td>
<td>1.46</td>
<td>1.03</td>
</tr>
<tr>
<td>Listening to other tapes</td>
<td>1.46</td>
<td>1.83</td>
</tr>
<tr>
<td>Listening to CDs</td>
<td>.39</td>
<td>.95</td>
</tr>
<tr>
<td>Using computer</td>
<td>.18</td>
<td>.55</td>
</tr>
<tr>
<td><strong>Other activities</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Attending kindergarten</td>
<td>11.47</td>
<td>4.05</td>
</tr>
<tr>
<td>Eating, washing, everyday activities</td>
<td>8.07</td>
<td>1.92</td>
</tr>
<tr>
<td>Playing inside the house</td>
<td>7.54</td>
<td>3.26</td>
</tr>
<tr>
<td>Playing outside the house</td>
<td>2.62</td>
<td>1.93</td>
</tr>
<tr>
<td>Helping with chores</td>
<td>2.45</td>
<td>1.65</td>
</tr>
<tr>
<td>Relaxing, afternoon nap</td>
<td>2.20</td>
<td>2.39</td>
</tr>
<tr>
<td>Visiting friends</td>
<td>2.08</td>
<td>2.46</td>
</tr>
<tr>
<td>Being in transit</td>
<td>2.03</td>
<td>1.37</td>
</tr>
<tr>
<td>Going on excursion</td>
<td>1.52</td>
<td>1.89</td>
</tr>
<tr>
<td>Crayoning, tinkering, making music</td>
<td>1.39</td>
<td>1.16</td>
</tr>
</tbody>
</table>

*Annotation:* *a* Includes primary and secondary exposure.

Influence of Formal Design Elements on Subject’s Use of the Pupunga Tape

An analysis of variance was conducted to determine the impact of the formal design elements on primary and secondary exposure to the tape (combined primary and secondary usage was not significantly influenced by the manipulation of the formal design elements, $F(1,78) = 2.64, ns$). For primary use of the tape the formal design elements did influence the time children listened to the tape, $F(1,78) = 5.61, p < .05$. I.e., children who received the feature rich tape version devoted significantly more time to listening than children who received the alternative version (see figure 1). An analysis of secondary usage did not reveal any effects of the formal design elements on subject’s use of the Pupunga tape, $F(1,78) < 1, ns$.

Influence of Emotional Attractiveness of the Protagonist on Subject’s Use of the Pupunga Tape

Several analyses of variance were conducted to determine the impact of the emotional attractiveness of the protagonist on combined primary and secondary usage of the tape as well as on primary or secondary use alone, but did not reveal any significant effects (all $F$s < 1). In addition, no significant interaction effects between the variation of the emotional attractiveness of the protagonist and the variation of the formal design elements were found for combined or for primary and secondary usage of the tape only (all $F$s < 1).
However, as the expected increase in the emotional commitment of those children who received the stuffed animal and the coloring book was not observed for all of these children, and as some of the children who did not receive these additional objects nonetheless showed a strong emotional commitment with Pupunga, we repeated the data analysis after consideration of the treatment check. Using a median split, we excluded those children of the high emotional attractiveness condition who showed a weaker commitment. Accordingly, in the group that was expected to experience Pupunga as emotionally less attractive, children who displayed stronger commitment values than the group median were excluded. This way, only children were included who were considered to have strongly adopted the intended disposition towards the story’s protagonist: one group consisted of children with a very low emotional commitment (n = 20), whereas the other group showed a very strong commitment towards Pupunga (n = 23). A comparison of these groups revealed the influence of emotional attractiveness on tape use. The sub-sample of children who experienced Pupunga as especially unattractive (M = 1.01 TIs, SD = .93) used the tape less frequently than the children who experienced Pupunga as very attractive (M = 1.74 TIs, SD = 1.04). The difference in overall usage is statistically significant, F(1,42) = 5.76, p < .05, and occurred in both primary and secondary usage. However, it was only significant for primary exposure, F(1,42) = 4.22, p < .05.

Correlations between the emotional attractiveness and the usage of the Pupunga tape for all children (i.e. regardless of the success of the attractiveness manipulation) confirm these results: The more the children experienced Pupunga as emotionally attractive, the more they listened to the tape overall (r = .37, p < .01) and the higher also was the secondary usage (r = .31, p < .01). The relationship between emotional attractiveness and primary usage almost reached significance (r = .21, p = .07).

Discussion

The present study investigated the impact of 1) the emotional attractiveness of a story’s protagonist and 2) the formal design elements of a narrative audio tape on the frequency and duration of preschoolers’ selective exposure to this tape.

Emotional Attractiveness

Although it was not possible to demonstrate the influence of the protagonists’ emotional attractiveness on tape usage experimentally for the whole sample, it could be demonstrated for children who developed an especially strong or weak disposition to the story’s protagonist. Moreover, it was possible to substantiate this influence on a correlational base for the whole sample. This supports contemporary theories of media entertainment. Specifically, the observed impact of the protagonists’ emotional attractiveness is in line with Affective Disposition Theory (Zillmann, 1991, 1996). A character’s emotional attractiveness is a key motivation for young children to use an entertaining media offering. This relationship has been demonstrated for older individuals (Zillmann, 1996) and is obviously true for younger children as well. However, there seem to be remarkable differences among preschoolers in their perception of ‘likeability’ or ‘attractiveness’ in a media protagonist, a fact which may explain the failure to demonstrate the effect of emotional attractiveness for the whole sample. In detail, we suggest two possible explanations: First, having or not having the chance to develop a positive disposition towards a story’s protagonist through additional features does not necessarily lead to the development of sympathy or antipathy, respectively. Obviously, even children who do not get a toy or coloring book of a character can still feel positively towards that character. This holds especially true for our investigation, as the main character was not displayed in a negative, but in a likeable manner. On the other hand, children may develop a weaker emotional commitment to the protagonist if they are scared of the story’s topic. As we used the topic “being separated from my mother”, this may be true for our investigation, although this topic is of high importance for children aged three to four (Jörg, 1994). Second, it might be that some of the preschoolers did not identify the stuffed animal as an anthropomorphic social entity. According to Hartmann et al. (2004), facilitation of parasocial interaction is supported if a persona displays anthropomorphic characteristics, especially when encountering her/him for the first time. However, the stuffed animal and the coloring book did not show any of these characteristics when they were delivered to the children. The little elephant only had anthropomorphic qualities in the tape’s story.

Formal Design Elements

The impact of formal design elements, such as music, different voices and sound effects, seems to be even more important in explaining preschoolers’ selective exposure to entertainment media than likeability of the protagonist. In line with previous research on television (Rice et al., 1983) and Berlyne’s (1960) attention-eliciting character-
istics, special auditory features enhance attention to narrative tapes as is demonstrated by a higher primary usage of the feature rich tape. Supporting the findings of previous repetition studies on adults (Tannenbaum, 1985), our results indicate that for repetitive usage, preschoolers also prefer entertaining media offerings to less entertaining ones. In addition, similar to the results of Furno-Lamude and Anderson (1992), the significant effect of the formal design elements on primary usage suggests that preschoolers’ repetitive use is fostered by the possibility of detecting details of special sound effects and voices they missed when listening to the tape for the first time. The chance of remembering the parts they forgot in the meantime or of picking up on some of the lines they missed by repeating the same story over and over again is especially important for preschoolers because of their limited ability to process and understand verbal information. In this context it may be that preschoolers are specifically interested in nonverbal story components, as nonverbal elements like sound effects can prompt vivid imagery and may therefore enhance young children’s understanding of the story, which in turn increases the appeal of tapes that offer such supporting sound effects.

However, the failure to demonstrate an increased usage of the feature rich tape for combined primary and secondary as well as secondary listening time indicates that other factors may be important for preschoolers’ selective exposure to narrative audio tapes as well. For example, as it is suggested by Tannenbaum (1985) for television and known from children’s desire for repetition of the same bedtime stories, ritualistic usage and familiarity must not be neglected when considering preschoolers’ listening to narrative audio tapes.

Limitations and Future Directions

The present study investigated children’s exposure to narrative audio tapes by providing a brand new tape to the children. This procedure implies certain limitations. Since the tape was introduced to the children as a gift and was completely unknown to them, their curiosity about the tape was probably very high, a fact which would have increased exposure times beyond natural amounts. Moreover, some of the participating parents may have been motivated to be ‘good’ participants and ensure that the tape was listened to ‘frequently enough’, which also would have increased the children’s exposure time. In turn, both effects may have reduced the amount of time children would have spent with other audio tapes and/or other media offerings under normal conditions. However, these limitations would not have impacted the experimental findings. In a follow-up study, a longer diary period could shed some light on such curiosity and ‘good participants’ effects.

Although there was no difference between the socioeconomic status of the two emotional attractiveness conditions, the limited randomized assignment (randomization was performed at the level of kindergarten classes, not of individuals) to these conditions may have caused other differences between groups that we did not measure and therefore could not control for. Thus, a replication of this investigation without the limited randomization we were forced to apply should be done to confirm our results. Nonetheless, as participants were investigated in single sessions at home and not within their preschool groups, at least influences arising from dynamics inside the respective group can be ruled out.

Besides the possible applications of these findings, the study suggests that a more intensive exploration of young children’s understanding and processing of auditory media messages is necessary. This concerns the role of formal features in particular. As we varied several formal features at the same time, it is impossible to say which of these features contributed to the increased primary usage the most. Further studies should focus on single features, thus investigating possible differences between messages transmitted by audiovisual versus auditory media in more detail. In addition, with the chosen model accounting for only 3.5 percent of variance, other factors than the ones analysed in this investigation seem to be important for explaining children’s repeated listening to narrative audio tapes. Similar to television, sociological and ecological factors (Truglio et al., 1996) as well as habitual aspects (Rosenstein & Grant, 1997) may be important and therefore should be addressed in further research.

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References


