Children’s conceptualization of law enforcement on television and in real life

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Purpose. Television police dramas provide viewers with an inaccurate representation of police work, overemphasizing sensational and dramatic activities while underemphasizing routine duties. This raises the critical issue of whether such misrepresentations are reflected in children’s perceptions of law-enforcement activities in real life.

Method. A total of 96 children (Grades 1, 3, 5 and 7) were asked to make estimates regarding how often various law-enforcement activities occurred on TV police shows and in real life. The relative contributions of age, perceived usefulness of police shows and real life models for learning about law enforcement and viewing frequency of police shows in predicting children’s estimations at law enforcement were assessed.

Results. Activities overrepresented on TV were perceived by children to be relatively frequent in real life police work. Activities underrepresented on TV shows were perceived by children to be relatively infrequent in real life. The more children (especially first graders) reported watching TV police shows, and the more they perceived them contributing to their knowledge about police work, the more inaccurate was their perception of law enforcement in real life. Perceived informativeness of real life models did not predict children’s perceptions of law enforcement in real life.

For many children, opportunities to observe the operations of law enforcement and criminal justice are limited primarily to their television experiences. Children have little direct contact with police officers, but are likely to see them often in crime dramas, other entertainment and in the news. The activities and behaviours attributed to the police on television, however, may be substantially different from those of police in the real world. Content analyses have demonstrated that TV representations of the police and crime-related matters focus on the sensational, emphasizing serious crimes and dramatic pursuits rather than routine work, and favouring the crime control model of justice rather than due process (Haney & Manzolati, 1988; Sparks, 1992). Are the patterns of these media experiences

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reflected in children’s beliefs about the work of the police in real life? In the present study, we investigate the characteristics of children’s schemata of law enforcement on TV and in real life.

Developments in the conceptualization of law enforcement through TV

Previous research suggests that knowledge and beliefs about law enforcement and legal concepts may be influenced by what children learn from TV. Children allude to TV shows as sources of information about lawyers and police work (Dorr, 1986; Warren-Leubecker, Tate, Hinton, & Ozbeck, 1989). It is also well established that many children have only fragmentary understanding of the law, its institutions, personnel and procedures (Goodman, Rudy, Bottoms, & Aman, 1990; Saywitz, 1989; Saywitz, Jaenicke, & Camparo, 1990; Warren-Leubecker et al., 1989). In this context, viewing inaccurate and distorted representations of law enforcement on TV may have particular potency. Some theories of media influence, most notably cultivation theory (Gerbner, Gross, Morgan, & Signorrelli, 1980, 1986), maintain that extensive exposure to the dramatic content of TV shapes people’s perceptions of the world around them to the extent of cultivating false perceptions of social reality. Consistent with this thesis, Carlson (1985) found that adolescents who were heavier viewers of TV crime dramas were comparatively ill informed about legal processes and had more anti-civil libertarian attitudes. On the other hand, Saywitz (1989) found that heavy viewing children were better informed about the meanings of basic legal vocabulary. Saywitz et al. (1990) also reported a high correlation between viewing of court-related programmes and knowledge of legal terminology, though this correlation reduced to negligible when age was partialled out.

However, many researchers have argued that amount of viewing does not appear to be the only important factor in learning from TV. Potter (1986) found that the cultivation effect was high only among adolescents who identified strongly with the characters. Rubin, Perse, and Taylor (1988) found that high amounts of viewing of crime programmes in general was not associated with a mean world perception, but depended instead on the specific content watched. Clifford, Gunter, and McAleer (1995) argue that young viewers can distinguish between TV and reality, and report evidence of their own that comprehension of police show content did not vary as a function of children’s amount of previous viewing.

These studies, then, qualify the view that the amount of TV watched straightforwardly predicts what children learn from the medium. However, they do not preclude the possibility that children can learn from TV. In relation to police show content, there is certainly evidence that even quite young viewers learn a lot. These kinds of programmes are watched by primary school children (Buckingham, 1993; Sprafkin & Gadow, 1986; Sprafkin, Gadow, & Abelman, 1992), and children appear to acquire familiarity with at least some elements of the typical content of the programmes (Buckingham, 1993; Collins & Wellman, 1982; Low & Durkin, 1997, 1998, 2000). When young viewers were asked to relate what usually happens in police programmes, Low and Durkin (1997) found that even Grade 1 participants were able to provide coherent scripts that were general in form, and sequentially organized. Children’s scripts also exhibited a high degree of commonality. First
graders typically mentioned that in police programmes, there is first a crime, followed by a chase and eventually an arrest. Children’s representations reflected accurately content analysts’ (e.g. Dominick, 1973; Sparks, 1992) findings of what police programmes show and do not show. Low and Durkin also report that with age, children’s scripts became more hierarchical and that deviations from the canonical routine were incorporated. For example, older participants mentioned that instead of a successful arrest at the end of the programme, the criminals sometimes escape.

Children do, then, gather some information about law enforcement from television. However, many of the details of what they learn remain to be investigated, and can be mediated by their own real world experiences. Where children have access to real life information, it may bear upon their interpretations of what they view (Dorr, 1986; Dorr, Kovaric, & Doubleday, 1990; Huston, Watkins, & Kunkel, 1989; Murray, 1993). Wright et al. (1995) investigated whether children could form separate occupational schemas for TV and real life. Among the occupations that they examined was that of police officer. They found that both younger (6–8 years) and older (10–12 years) children perceived TV police officers differently to real life police officers; the former were seen as more sex-typed, more affluent, less hard-working and were believed to arrest more criminals than their real life counterparts. There were no differences, though, in respect of the frequencies of police officers getting hurt and using weapons. Both age groups perceived these as equally frequent as both TV and real life police activities.

Wright et al.’s (1995) findings suggest that in respect of attributes which children may at least occasionally have opportunities to observe directly (e.g. the sex-role behaviour or material affluence of police officers), they may be able to differentiate between media portrayals and real life. Even infrequent and incidental observations of police officers on public duty might be sufficient to reveal that they are not all as macho as the stars of some TV programmes (cf. Murray, 1993). In respect of the more technical aspects of police work, however, it is less clear that children are able to differentiate. Wright et al.’s participants did perceive a difference between television and real life concerning incidence of arrest (with arrests seen as more likely in television), but not concerning getting hurt or using guns.

The principal focus of the Wright et al. (1995) study was children’s occupational role schemata. It was not aimed at addressing crime and law enforcement specifically. There are several other aspects of police work that are either overrepresented on TV, or underrepresented, relative to their actual frequencies in real life. Overrepresented activities include: (1) shooting guns; (2) engaging in high-speed pursuits; (3) performing arrests; and (4) conducting illegal searches/harassing suspects (Garofalo, 1981; Hans & Dee, 1991; Macaulay, 1987; Simon & Fejes, 1980; Sparks, 1992). Several areas of police work are consistently underrepresented in TV police shows. These include: (1) handling cases involving disturbance of peace; (2) respectful questioning; (3) performing administrative work; and (4) patrol duties (Horton & Smith, 1988; Hurd, 1979; Lichter & Lichter, 1983; Moran, 1985; Swanton & Hannigan, 1985).
The present study

In the present study, we investigated whether there is any difference between children’s perception of the frequency of various police activities on TV and in real life. Television misrepresents significantly the world of law enforcement. Previous research has documented that young children have extensive experience and knowledge of what happens in law-enforcement programmes (e.g., Low & Durkin, 1997). If such event representations are a likely source of children’s initial construction of law enforcement in the real world, then their perception of the frequency of various police activities in real life should be similar to their same age counterparts’ estimates for these activities on TV.

We also examined the relative contributions of age, perceived usefulness of police shows for learning about law enforcement, viewing frequency of police shows and extent of real life learning experiences in predicting children’s estimations of law enforcement. Cultivation theory as articulated by Gerbner and his colleagues (e.g., Gerbner et al., 1980, 1986) asserts that for heavier viewers, TV cultivates social perceptions of the world that are consistent with TV images. According to this perspective, viewing frequency is an important predictor of children’s estimates of police work on TV and in real life. Simply put, the more children watch, the more consonant their schemata for real life law enforcement would be with TV representations.

However, TV police shows do not act in a developmental vacuum. Rubin (1985) points out that children interact actively with the media, reflecting their cognitive need to obtain information, and that such motivations need to be taken into account when studying media effects. It has been found that young children watch TV more to gather information, and often view it as socially realistic (e.g. Rubin, 1985, 1986; Wright et al., 1995). Older children rely less on TV, because of the greater availability of other sources of information. In light of these developmental trends, we expected that perceptions of the usefulness of TV police shows and of real life models for learning about police work would also be good predictors of children’s schemata of law enforcement.

Developmental research into children’s event representations leads to the same expectation. Studies have found that young children can develop scripts rapidly after only a few exposures to events (e.g. Farrar & Goodman, 1992; Nelson, 1996). Such capabilities suggest that young viewers may not need much exposure to TV police shows to understand what routinely happens on such programmes, and to use such knowledge for making social realism estimates. On the other hand, event representation research also shows that by middle childhood, children are able to treat scripts more flexibly, to entertain the possibility of unusual outcomes, and to integrate knowledge from different sources (Farrar & Goodman, 1992; Low & Durkin, 1998). Hence, these cognitively based accounts converge in suggesting that what is also important is the extent to which the child subjectively perceives him- or herself as able to use TV shows and real life models as sources of knowledge acquisition.

In sum, we expected that viewing frequency, age, perceived usefulness of TV police shows and perceived usefulness of real life models would be important
predictors of children’s estimates of police work on TV and in real life. If, as maintained by Clifford et al. (1995) and Low and Durkin (1997), even quite young viewers are familiar with the police show genre and discern general patterns within it, then this should be reflected in differences between conditions. Specifically, activities which are overrepresented in television were expected to be rated as more frequent by children in the TV condition than by children in the real life condition; activities which are underrepresented on TV were expected to be rated as less frequent by children in the TV condition than by children in the real life condition. As more experienced viewers should be more familiar with the details of the genre, higher levels of viewing frequency were expected to predict higher estimates of the frequency of overrepresented police activities on TV, and lower estimates of underrepresented activities. If TV is one of children’s principal sources of information about police work, then higher viewing should also predict higher estimates of overrepresented activities (and lower estimates of underrepresented activities) in real life. However, with age, we expected children to become less dependent on the medium, more sceptical viewers, and to have more opportunities to observe actual police officers; hence increases in age and greater perceived usefulness of real life models were expected to predict lower susceptibility to the effects of TV distortion on real life estimates.

**Method**

**Participants**

A total of 96 children participated in the study. There were 24 children from each of Grade 1 (mean age = 5;8; range = 5;6–6;3; 14 males and 10 females), Grade 3 (M = 7;9; range = 7;5–8;4; 13 males and 11 females), Grade 5 (M = 9;5; range = 9;2–9;8; 12 males and 12 females) and Grade 7 (M = 11;4; range = 11;1–11;6; 14 male and 10 females). The children were recruited from two local primary schools in a large Australian city. All children were native speakers of English and were from middle to upper-middle class families.

**Materials**

Eight areas in which police work is misrepresented on TV have been identified in the Introduction. Brief examples of each of these activities were prepared on videotape. In addition, as a methodological check, we included an activity that is very unusual in police behaviour. The original sources were obtained from several domestically and internationally produced crime programmes broadcast on commercial TV stations in Australia. These included ‘The Commish’, ‘The Bill’, ‘Blue Heelers’ and ‘NYPD Blue’. The excerpts were as follows:

**Over-represented activities:**
- **Shooting guns:** In this clip, the police are on a rooftop armed and ready to shoot a criminal.
- **Break and enter:** Several police officers kick down the door and search a suspect’s home.
- **High-speed pursuit:** Police officers engage in a high-speed car chase.
- **Arrest:** Police officers arrest a criminal and read him his rights.

**Under-represented activities:**
- **Responding to a disturbance of peace call:** Police are shown going to a home and telling the occupant to keep the party noise down.
- **Respectful interviewing:** Police are shown questioning a suspect in a calm, respectful manner.
- **Paperwork:** A police officer sits at his desk and fills in forms.
Patrol: Police officers perform beat patrol around a shopping mall. Improbable activity:

Flower arrangement: A policeman is arranging some flowers.

Each clip was approximately 15 seconds in duration. The original soundtracks were largely preserved while removing any harsh language. This resulted in only minor deletions from the dialogue and did not disrupt the clarity or dynamics of the scene. All clips were recorded onto videotapes.

Procedure

Participants were allocated randomly in equal numbers to either the TV or real life conditions. In each condition, the participants completed the police activity task, the extent of learning from TV and real life task, and the frequency of viewing task. Each participant was interviewed individually in a quiet room at his or her school. First the interviewer spent a few minutes in establishing rapport. The instructions for the three tasks were as follows.

Police activity task. The participant was instructed, ‘I am going to show you some videos with police on them and I’m going to ask you some questions’. Order of presentation of the police activity clips was randomized. The general procedure was that each clip was shown and then the video was paused while the experimenter asked the participant the relevant questions. For each question, the participant was asked to indicate on a response sheet that presented closed-ended frequency ratings how often police conducted that type of activity. The five possible frequencies were: never, seldom, sometimes, most times and always. Because of constraints in children’s verbal abilities, closed-ended frequency ratings of this kind have often been used by developmental researchers (e.g. Buerkel-Rothfuss, Greenberg, Atkin, & Neuendorf, 1982; Dorr et al., 1990). Each participant was read the response options and it was ascertained that he or she understood what they meant. No participant indicated any difficulties in understanding the procedure.

The questions presented to children for the various police activities were as follows (illustrations based on the TV condition):

For shooting guns: ‘Here [the experimenter points to the TV monitor with the paused frame], the police are going to shoot at the bad man. In TV police shows, how often do you think the police shoot their guns at people?’
For the police search: ‘Here the police break into the bad guy’s house to find clues. In TV police shows, how often do you think the police break into a person’s house to find clues?’
For the chase: ‘Here the police are driving their car very fast to chase after the bad guy. In TV police shows, how often do you think the police go driving their cars very fast to chase after bad guys?’
For the arrest: ‘Here the police are arresting the bad guy. In TV police shows, how often do you think the police get to arrest bad guys?’
For disturbance of peace: ‘Here the police are trying to stop people from making too much noise and disturbing the neighbours. In TV police shows, how often do you think the police have to go trying to stop people from making too much noise?’
For the police questioning: ‘Here the police want to find out some clues from the bad guy so they are speaking nicely to him and not yelling at him. In TV police shows, how often do you think that when the police want to find out clues from the bad guy, they speak nicely to him?’
For paperwork: ‘Here the policeman is filling in some forms. In TV police shows, how often do you think the police fill in forms?’
For beat patrol: ‘Here the policemen are walking about the city. In TV police shows, how often do you think the police go walking in the city?’
For flower arrangement: ‘Here the policeman is arranging some flowers. In TV police shows, how often do you think police arrange flowers?’

In the real life condition, the phrase ‘in TV police shows’ was replaced with ‘in real life’. Flower arrangement is not associated with law enforcement in either real life or TV police shows. This activity was included to ensure that children were shown clips that ranged from possible to improbable. More importantly, this clip served as a validity check on responses to the other eight police clips. If our
procedure was indeed tapping into children's perceptions of police work, then participants in both conditions should demonstrate that they are aware that flower arrangement is not associated with police work. In fact, we found that all children in both conditions responded that such an activity is never conducted by police officers. This indicates that children were able to differentiate among the activities and were prepared to reject activities as improbable if that was their judgment.

Extent of learning from TV and real life. Participants were instructed to indicate on a response sheet with close-ended frequency ratings how useful police shows were to them. They were asked specifically how much of what they know about what police do comes from watching TV police shows. Children were also asked how much of what they know about what police do came from observing real life police. Order of questions was counterbalanced; half of the participants were asked how much they know from TV police shows first and from seeing real life police second, and half received the reverse order. The possible frequencies were: nothing, a little bit, half, a whole lot, and everything.

Frequency of viewing. Participants were asked to indicate how often they had viewed police shows during the past six months. The closed-ended frequency ratings were: never, seldom, some weeks, most weeks, or every week.

Results

Analyses of children's estimates of police activities on TV and in real life are presented first. This is followed by multiple regression analyses examining the magnitude to which age, amount of viewing and perceived extent of learning from TV and real life predicted frequency estimates in each condition for both under- and over-represented activities. All effects involving task order and gender were not significant. Hence these factors were eliminated from all analyses reported here.

Condition differences

For each of the eight police activities, separate 4 (Grade: 1, 3, 5 and 7) x 2 (Condition: TV and real life) ANOVAs were conducted. The mean frequency estimate for each police activity with predicted directions for condition differences and their F ratios are shown in Table 1.

Frequency estimates for underrepresented media police activities. Children's frequency estimate for police handling disturbance of the peace on TV was significantly lower than their frequency estimate for police handling such a task in real life. It is worthwhile to note that while the main effect of condition was significant, children's mean estimate of dealing with disturbance of the peace in the real life condition tended to be somewhat low. Children in both conditions perceived respectful police interviewing to be infrequent. Children's frequency estimate for police paperwork on TV was significantly lower than the frequency estimate for police paperwork in real life. Similarly, children's frequency estimate for patrol duty on TV was significantly lower than their frequency estimate for patrol duty in real life. In sum, activities that are underrepresented in police shows (particularly handling disturbance of the peace and questioning technique) were perceived by children in the TV condition as infrequent in television, but, with the exception of respectful interviewing, as somewhat more frequent in real life.

Frequency estimates for overrepresented media police activities. For police shooting guns, the main effect of condition was qualified by a significant two-way condition x grade
interaction. Simple main effects analyses indicated that for Grade 1 and 3 children, there was no significant difference in the frequency estimate of police shooting guns between the TV and real life conditions. Young children in both conditions perceived that police regularly shoot guns (Grade 1: $M_{TV} = 3.08$ vs. $M_{real\ life} = 3.25$; Grade 3: $M_{TV} = 2.92$ vs. $M_{real\ life} = 2.50$). However, for Grade 5 and 7 children, participants in the TV condition, as compared to those in the real life condition, gave higher frequency estimates of police shooting guns (Grade 5: $M_{TV} = 2.42$ vs. $M_{real\ life} = 1.83$; Grade 7: $M_{TV} = 2.83$ vs. $M_{real\ life} = 1.50$). For police engaging in break-and-enter, the main effects of grade, condition and the two-way grade $\times$ condition interaction were not significant. Children in the TV and real life conditions perceived that police engage in such an activity to some degree. For high speed chases, there was a significant two-way grade $\times$ condition interaction. Simple main effects analyses indicated that for Grade 1, 3 and 5 children, there was no significant difference in the frequency estimate of high-speed police pursuits between the TV and real life conditions. Children in these two conditions perceived that high-speed police pursuits occurred frequently (Grade 1: $M_{TV} = 3.08$ vs. $M_{real\ life} = 3.83$; Grade 3: $M_{TV} = 3.58$ vs. $M_{real\ life} = 3.67$; Grade 5: $M_{TV} = 3.25$ vs. $M_{real\ life} = 3.08$). However, for Grade 7 children, participants in the TV condition, as compared to those in the real life condition, gave higher frequency estimates of high-speed police pursuits ($M = 3.42$ vs. $M = 2.00$). For police making arrests, there was only a significant main effect of grade. Post hoc Tukey-B tests indicated that Grade 1 children’s estimate for police making arrests ($M = 3.42$) was higher than Grade 7 children’s estimates ($M = 3.00$; $p<.05$). In sum, activities that are overrepresented in police shows were perceived by all children in the TV condition as being frequent in television, and by younger children in the real life condition as being frequent in real life.

<table>
<thead>
<tr>
<th>Activity</th>
<th>Prediction</th>
<th>TV</th>
<th>Real</th>
<th>d.f.</th>
<th>$F$ ratio</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Underrepresented activities</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Disturbance of peace</td>
<td>TV&lt;RL</td>
<td>0.98 (0.83)</td>
<td>1.67 (0.93)</td>
<td>1.88</td>
<td>13.75***</td>
</tr>
<tr>
<td>Respectful interviewing</td>
<td>TV&lt;RL</td>
<td>1.50 (0.90)</td>
<td>1.56 (0.97)</td>
<td>1.88</td>
<td>0.11</td>
</tr>
<tr>
<td>Paper work</td>
<td>TV&lt;RL</td>
<td>1.44 (0.90)</td>
<td>3.40 (0.79)</td>
<td>1.88</td>
<td>125.58***</td>
</tr>
<tr>
<td>Patrol duty</td>
<td>TV&lt;RL</td>
<td>1.08 (0.74)</td>
<td>3.79 (0.54)</td>
<td>1.88</td>
<td>436.39***</td>
</tr>
<tr>
<td><strong>Overrepresented activities</strong></td>
<td></td>
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<td></td>
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<td></td>
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<tr>
<td>Shooting guns$^a$</td>
<td>TV&gt;RL</td>
<td>2.81 (0.79)</td>
<td>2.27 (1.11)</td>
<td>1.88</td>
<td>9.94**</td>
</tr>
<tr>
<td>Break and enter</td>
<td>TV&gt;RL</td>
<td>2.88 (0.67)</td>
<td>2.69 (1.08)</td>
<td>1.88</td>
<td>1.04</td>
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<tr>
<td>High-speed pursuits$^b$</td>
<td>TV&gt;RL</td>
<td>3.38 (0.76)</td>
<td>3.15 (1.05)</td>
<td>1.88</td>
<td>2.07</td>
</tr>
<tr>
<td>Making arrests$^c$</td>
<td>TV&gt;RL</td>
<td>3.42 (0.65)</td>
<td>3.17 (0.78)</td>
<td>1.88</td>
<td>3.39</td>
</tr>
</tbody>
</table>

**$p<.01$; ***$p<.001$.  
$^a$The multivariate Condition $\times$ Grade interaction was significant ($F(3,88)=3.25, p<.05$).  
$^b$The multivariate Condition $\times$ Grade interaction was significant ($F(3,88)=7.13, p<.001$).  
$^c$The univariate main effect of Grade was significant ($F(3,88)=4.39, p<.01$).  

Table 1. Predicted direction and means for frequency estimates combined across grade (standard deviations in parentheses)
Predictors of children’s estimates about law enforcement

Children’s estimates for the three items: handling disturbance of peace, doing paperwork and patrol duty, were combined into one score representing perception of media underrepresented police work. Similarly, children’s estimates for the three items: police shooting guns, high-speed pursuits and making arrests, were combined into one score representing perception of media overrepresented police work. All these items were selected as most clearly TV-distorted on the basis of both a priori hypotheses, and age, condition and age × condition differences in children’s estimates of what police on TV and in real life do.

Two separate multiple regression analyses (one each for underrepresented and for overrepresented activities) were performed with children’s summed frequency ratings in the TV condition as the dependent variable. Age, perceived extent of learning from TV police shows, perceived extent of learning from real life and amount of viewing of police shows served as independent variables. The same design was applied to children’s summed frequency ratings in the real life condition. The results of these analyses are presented in Tables 2 and 3.

Underrepresented activities—TV condition. Table 2 shows that for Grade 1 children, both viewing frequency and perceived extent of learning about police work from TV predicted children’s estimates in the TV condition. These two variables accounted for 72% of the variance (adjusted $R^2 = .62$, $F(3,8) = 6.88$, $p < .05$).

### Table 2. Regression coefficients predicting estimates in TV condition from grade level, extent of learning from TV, viewing frequency and extent of learning from real life

<table>
<thead>
<tr>
<th>Grade 1</th>
<th>Grade 3</th>
<th>Grade 5</th>
<th>Grade 7</th>
<th>Grades combined</th>
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<tr>
<td>Estimating about media underrepresented police activities on TV</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Grade level</td>
<td></td>
<td></td>
<td></td>
<td>$-.25^*$</td>
</tr>
<tr>
<td>Extent of learning from TV</td>
<td>$-.62^*$</td>
<td>$-.34$</td>
<td>$-.77^*$</td>
<td>$-.29$</td>
</tr>
<tr>
<td>TV viewing frequency</td>
<td>$-.54^*$</td>
<td>$.05$</td>
<td>$.19$</td>
<td>$-.58$</td>
</tr>
<tr>
<td>Extent of learning from RL</td>
<td>$-.03$</td>
<td>$.49$</td>
<td>$-.03$</td>
<td>$-.01$</td>
</tr>
<tr>
<td>$R^2$</td>
<td>$.72$</td>
<td>$.54$</td>
<td>$.60$</td>
<td>$.66$</td>
</tr>
<tr>
<td>Adjusted $R^2$</td>
<td>$.62$</td>
<td>$.37$</td>
<td>$.45$</td>
<td>$.53$</td>
</tr>
<tr>
<td>$R$</td>
<td>$.85^*$</td>
<td>$.73$</td>
<td>$.77$</td>
<td>$.81$</td>
</tr>
</tbody>
</table>

| Estimating about media overrepresented police activities on TV | | | | |
| Grade level | | | | $-.14^*$ |
| Extent of learning from TV | $.71^{**}$ | $.76$ | $.25$ | $.29$ | $.40^{**}$ |
| TV viewing frequency | $-.28$ | $.55$ | $.48$ | $-.18$ | $-.04$ |
| Extent of learning from RL | $-.38$ | $-.16$ | $-.12$ | $-.11$ | $-.21$ |
| $R^2$ | $.80$ | $.38$ | $.34$ | $.07$ | $.24$ |
| Adjusted $R^2$ | $.72$ | $.15$ | $.09$ | $-.28$ | $.17$ |
| $R$ | $.89^{**}$ | $.62$ | $.58$ | $.26$ | $.49^*$ |

*p < .05; **p < .01; ***p < .001.
Referring to Table 2, when children from all four grade levels were entered into the regression analysis, only grade level and perceived extent of learning about police from TV predicted children’s estimates. These two variables accounted for 49% of the variance (adjusted $R^2 = .44$, $F(4,43) = 10.35$, $p < .001$).

### Overrepresented activities—TV condition

As Table 2 indicates, for Grade 1 children, only perceived extent of learning about police work from TV predicted children’s estimates. This variable accounted for 80% of the variance (adjusted $R^2 = .72$, $F(3,8) = 10.34$, $p < .01$). When children from all four grade levels were entered into the regression analysis, perceived extent of learning about police from TV also predicted children’s estimates. This variable accounted for 24% of the variance (adjusted $R^2 = .17$, $F(4,43) = 3.35$, $p < .05$).

### Underrepresented activities—real life condition

As shown in Table 3, for Grade 1 children, all three independent variables (IVs) contributed significantly to the prediction of estimates in the real life condition: viewing frequency, perceived source of knowledge from real life, and perceived source of knowledge from TV. Together these three variables accounted for 83% of the variance (adjusted $R^2 = .77$, $F(3,8) = 13.06$, $p < .01$). For Grade 7 children, only two of the IVs contributed significantly to the prediction of their estimates: perceived extent of learning from real life and perceived extent of learning from TV. Together these two variables accounted for 72% of the variance for Grade 7 children (adjusted $R^2 = .46$, $F(2,34) = 14.93$, $p < .001$).
$R^2 = .61, F(3,8) = 6.79, p < .05$). Upon entering participants from all grade levels into the regression analysis, both grade level and amount of viewing predicted children's estimates. The two variables accounted for 27% of the variance (adjusted $R^2 = .20, F(4,43) = 3.91, p < .01$).

**Overrepresented activities—real life condition.** As indicated in Table 3, when each of the individual grade levels were considered in isolation, none of the three independent variables (amount of viewing, perceived extent of learning from TV and from real life) held any significant predictive value. However, when participants from all grade levels were submitted into the regression analysis, grade level was the only significant predictor. Grade level accounted for 57% of the variance (adjusted $R^2 = .53, F(4,43) = 14.01, p < .001$).

**Discussion**

One aim of this study was to investigate whether children's estimates of the frequency of law-enforcement activities on TV and in real life differed. The results show that they do. Activities that are underrepresented in police shows were perceived by children in the TV condition as infrequent in television but, with the exception of respectful interviewing, children in the real life condition tended to perceive them as somewhat more frequent in real life. Activities that are overrepresented in police shows tended to be rated by children in the TV condition as more frequent than they were by children in the real life condition, though this was more marked among the younger participants. This suggests that, overall, children are sensitive to the patterns of information in television and, in terms of estimating frequency of occurrence, appear to distinguish between what they see on screen and what they believe happens in reality.

In the TV condition, all age groups were aware that some police activities were represented frequently on TV (e.g. pursuits, arrests, handling violent crime and dramatic search techniques) while some were represented infrequently (e.g. police handling order-related cases, respectful questioning, administrative work and patrol duty). Such data correspond with other search findings indicating that young school children have sophisticated awareness of TV patterns (e.g. Clifford et al., 1995; Low & Durkin, 1997). This supports theoretical suggestions that children's understanding of TV genres is schematically organized (Mandler, 1979; Wright, Huston, Reitz, & Piemyat, 1994). Wright et al. (1994) note that a genre is identified by a set of salient attributes that co-occur. They contend that children form event representations for different TV genres, each with its own identifying configuration of content attributes. The present findings, together with research by Low and Durkin (1997, 1998, 2000), further support Wright et al.'s account by demonstrating that children also have event representations of the law-enforcement genre of television.

Notwithstanding the apparent differentiation between TV and real life, the responses of children in the real life condition indicated that their perceptions were coloured by their TV knowledge. Children perceived the overrepresented police activities to be frequent in real life, and they perceived two of the underrepresented police activities to be infrequent in real life. These are things that they see police do
on TV and, to a certain extent, children believe that police do in real life. The younger children were particularly likely to attach high estimates to police in real life using guns and engaging in high-speed pursuits, two of the most vivid TV police activities. Interestingly, one police activity that children are likely to have opportunities to observe directly, namely patrol duty, is rated as high frequency in real life despite its perceived low occurrence rate on TV. This suggests that, where observation is available, it is drawn upon and can mitigate TV-based impressions. However, it is less obvious that children have many opportunities to see police officers engage in paperwork, yet this activity was also rated quite high in the real life condition. A possible explanation is that children know that paperwork is ubiquitous in adult occupations.

A second aim of the study was to examine the extent to which age, perceived extent of learning from TV, perceived extent of learning from real life, and frequency of TV viewing contributed to children’s estimates. While it should be acknowledged that the regression analyses were based on small Ns, and should be interpreted with due caution, they do suggest several important findings. First, consider children’s estimates of police activities in the TV condition. For the youngest age group (Grade 1 children), viewing frequency and perception of how much TV teaches about law enforcement played important predictive roles toward estimates about media underrepresented activities. The more Grade 1 children watched TV police shows, the more they perceived that the media underrepresented activities were infrequent in police shows. Additionally, the more Grade 1 children perceived that they learned a lot about law enforcement from watching TV police shows, the more they perceived that media underrepresented activities were infrequent in such shows. When Grade 1 children were estimating about media overrepresented activities, only the perceived amount of learning about law enforcement from police shows possessed significant predictive power. By the seventh grade, learning afforded by TV and viewing frequency all lose their predictive powers. The most important finding, then, for the TV condition is as follows. For young children, amount of viewing and how informative the TV shows are to them play important roles in determining what they abstract into their event representations about what routinely happens in law-enforcement programmes. To this extent, the findings are consistent with the predictions of cultivation theorists that exposure to the dramatic content of television influences people’s perceptions of the world, but any such effects seem restricted to young viewers with presumably little other source of information in the present domain. With age, the factor of viewing frequency seems to lose power for predicting knowledge about TV content. Consistent with previous research on children’s script generation capabilities (e.g. Farrar & Goodman, 1992), such data suggest that children may not need much exposure to TV police shows to know what typically happens in them. It may be that after viewing a few episodes of police shows, children can already develop scripts of what usually happens. In fact, Low and Durkin (1997) have found that 10-year-olds already possess highly elaborate knowledge of what happens in them. Future exposures to such programmes may not reveal much more information to the child since the storylines are highly stereotyped. Frequency of viewing may be a more consistent predictor when examining a cross-section of very young
children’s (i.e. 6 years and younger) understanding of police work as they are still developing their script knowledge of TV police shows.

When Grade 1 children were asked to estimate about media underrepresented activities in real life, viewing frequency, perceived extent of learning from TV and from real life played significant predictive roles. The more TV police shows young children watch, the more they estimated that these media underrepresented activities were not frequently conducted by real life police officers. In this case, a high amount of TV viewing negatively distorts young children’s perception of real life police officers engaging in routine duties. The more young children perceived that they learned a lot about law enforcement from TV shows, the more they perceived that police officers in the real world do not frequently engage in these media underrepresented items. With Grade 7 children, an opposite pattern was found with respect to the predictive role of learning afforded by TV. The more Grade 7 children perceived that they learned a lot about law enforcement from TV shows, the more they perceived that police officers in the real world do frequently engage in media underrepresented activities. The contrasting roles played by perceived informativeness of TV when estimating about media underrepresented activities for younger and older children could reflect two factors: one is accumulated experience (opportunities to observe real life police, learning from parents and other adults about police work), and the other is increased viewer scepticism (e.g. Dorr et al., 1990).

Interestingly, the more children (Grades 1 and 7) perceived that they learn a lot about the police from real life, the more they perceived that police officers in the real world do not frequently engage in media underrepresented activities. This may be because children have, in general, little exposure to real life police officers, and what instances they do encounter (e.g. guards at a shopping centre or in a bank) do not cover the full spectrum of routine police work. Our findings in this regard dovetail with other studies indicating that beliefs about the social realism of TV are not always consistently related to real life experience (e.g. Elliot & Slater, 1980; Greenberg & Reeves, 1976).

The pattern of data obtained here has important implications at the theoretical level. As would be expected by theorists who view children as active processors of TV content (e.g. Clifford et al., 1995; Rubin, 1985), perception of the usefulness of police shows (and usefulness of real life experiences) for learning about law enforcement also predicted children’s estimates. However, our data add to these theoretical expectations by suggesting that amount of viewing and perceptions of TV police show learning affordances may be more important for how younger children come to make decisions about social realism estimates of law enforcement, at least in the experimental confines studied here. A more consistent predictor of estimates about law enforcement on TV and in the real world appears to be age (or grade level). In our study, grade level may have been a proxy for cognitive development. To the extent that it is, children acquire their perceptions of law enforcement on TV and in real life not only as a result of experience with the medium, but also cognitive developments in script confirmation and deployment, moral and legal reasoning and understanding of the criminal justice system.
We turn now to some constraints on the data. First, a possible objection to our methodology is that, by using TV stimuli as prompts in both the TV and the real life conditions, we primed participants with TV imagery. The purpose of showing all participants the TV excerpts was to ensure that the same activities were under consideration in each condition. There is the risk that this might undermine the validity of the real life condition, since even quite rare police work could be rendered more vivid by exposure to TV illustration. However, this criticism would lead to the expectation that all of the activities should be estimated as frequent. Clearly, children in both conditions were able to differentiate among the activities, despite the fact that our methodology lent them equivalent status (i.e. each activity was shown once). All children were able readily to discount the improbable activity of flower arranging—despite the fact that they had just seen TV police perform it—and, in both conditions, they were able to distinguish activities that they believed happen a lot vs. others that they regarded as infrequent. Hence, it seems reasonable to conclude that the procedure served to illustrate the activities without in itself unduly influencing participants’ perceptions of their relative frequency.

Secondly, we did not include as a predictor variable children’s perception of the factuality of the various activities. For example, we did not include questions such as ‘If that policeman arrests bad guys on TV, does he arrest bad guys in real life?’ Wright et al. (1995) found that children who believed that TV shows are factual had more ‘television-like’ representations of real world occupations. It is likely that for our study, children who perceived police shows to be factual would have more television-like estimates in the real life condition. In fact, in the real life condition, the highest $R^2$ for all grade levels combined was .57. This indicates that 43% of the variability in children’s estimates for law enforcement in the real world still remains unaccounted for. What this means is that the social effects of TV viewing are not unidimensional, not merely a result of the content depicted on the screen. Our study partly demonstrates this by revealing that grade level, viewing frequency, perception of informativeness of TV and of real life encounters interact with type of content being judged to determine estimates about law enforcement. Future researchers could usefully examine how these factors interact further with perceived factuality and other cognitive structures such as attention and comprehension to determine children’s perception of law enforcement on TV and in the real world.

Thirdly, this study does not provide answers to the question of what cues are used by children to make their estimates about law enforcement on TV and in the real world. Formal features in fictional TV programmes include close-ups of actors’ faces, dramatic music, special effects and high-quality sound (Fitch, Huston, & Wright, 1993). In contrast, reality-based programming often features narrators, voice-overs, and disfluencies in speech style because of lack of rehearsal and lack of dramatic music. Several studies have found that with age, children can name various formal features as cues that a programme is fictional (e.g. Dorr, 1983; Morrison, Kelly, & Gardner, 1981). All the video clips used in this study were drawn from fictional programmes. A significant advantage of such a design is that the type of formal feature present would probably not confound children’s estimates in the two conditions. At the same time, this does not permit a thorough examination of how
the type of formal features influences children’s estimates. Future research could usefully request children to make judgments about law-enforcement content presented in two contexts: a fictional setting (e.g. ‘NYPD Blue’) and a reality-based setting (e.g. ‘Cops’). In this manner, one could examine whether children’s estimates about the occurrence of various law-enforcement activities can be altered when the video clips are matched for content but vary in terms of formal features. In light of our findings that more readily observed police activities are rated as frequent in real life even while rated as infrequent in television, it would also be desirable in future research to collect fuller information on the participants’ degree of direct exposure to police activities. For example, children who have visited a police station or had a police visit to their home or school may have different perspectives of what police do. Indeed, it is possible, although not tested here, that direct experience of police at work can promote greater viewer scepticism.

Fourthly, the measure of viewing experience employed here was limited, and it could be objected that children of different ages might interpret it differently, or answer it with varying levels of comprehension. Measuring children’s amount of viewing is fraught with difficulties (Anderson, Field, Collins, Lorch, & Nathan, 1985; Van der Voort & Vooijs, 1990), not least because being present at the time a programme is aired does not necessarily confirm attention and because children’s sense of time is dependent upon cognitive development. Even parental estimates are problematic (Anderson et al., 1985). Unfortunately, detailed observational time logs were not available to this study. In their absence, we used a simple scale which, although it cannot be claimed provides precise time measures, is designed to capture relativities in amount of viewing. On this basis, we obtained tentative evidence that amount of viewing may be a significant predictor among younger viewers but no evidence that it is important among older viewers. We offer the conservative interpretation that amount of viewing is not a major factor beyond some initial threshold.

Previous studies (e.g. Dorr, 1986; Wright et al., 1994) have found that children believe that crime dramas are socially realistic. This study provides further evidence that this is the case in relation to children’s learning about police work. Even though children recognize that some activities are over- or underrepresented on television, their perceptions of social reality diverge from actual statistics and lean consistently in the directions depicted in their principal mass medium. Nevertheless, the data show that it is possible for children eventually to arrive at estimates that are not dominated by TV misrepresentation of law enforcement. The important questions for future researchers to address include: (1) Which factors are important in predicting children’s perception of TV representations and social reality? (2) Are certain factors more important at certain ages? (3) Do certain factors lose predictive power with development, and if so, why? and (4) Do other factors come into play at later stages?

In sum, the present study extends previous research charting the development of children’s social learning from TV by demonstrating that children also use these sources in making judgments about the frequency of various law-enforcement activities in real life. Children interpret the frequencies of various activities in TV police shows as indicative of real life police work. As most police activities are less
frequently encountered in real life, TV is likely to remain a primary source of information and impressions. It remains to policy-makers, legal professionals and civics educators to judge whether it is desirable for children to derive their perceptions of law enforcement from TV police shows. The present study indicates that much of what children do learn from such sources will be inaccurate. By investigating what children believe on the basis of their media experiences, we attain a better informed basis for intervention via the classroom or other strategies.

Acknowledgements

We are grateful to the principals, teachers and students of Cottesloe Primary and North Cottesloe Primary for their generous participation in this study. We thank Herb Jurkiewicz for preparation of the audio-visual material used here.

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Received 19 April 2000; revised version received 14 September 2000