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A Content Analysis of the Representation of Traffic-Related Incidents on Australian Television July - August 1987

Author(s)

Bell, P.

Performing Organisation (Name and Address)

Macquarie University

Sponsor (Name and Address)

Federal Office of Road Safety
GPO Box 594
CANBERRA ACT 2601

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Federal Office of Road Safety
GPO Box 594
CANBERRA ACT 2601

Abstract

This study analyses the way Australian television represents traffic-related incidents. It focusses on programs watched by school-age children and describes the nature and frequency of those incidents from which children might possibly learn about road safety. The data was collected by analysing five weeks of television programs watched by large audiences of school-age children. In all programs, the predominant type of activity depicted is driving which is also the most dangerous activity. Dangerous incidents occurred up to seven times per hour and were high in adventure and news programs. The report recommends that road safety interventions be directed at specific genres of programs both within and outside the 4.00pm to 5.00pm period. A further recommendation is that children's programs produced locally should be encouraged to incorporate appropriate positive road and vehicle use models.

Keywords

Content analysis, children, television

NOTES:

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A CONTENT ANALYSIS OF THE REPRESENTATION OF TRAFFIC-RELATED INCIDENTS ON AUSTRALIAN TELEVISION JULY-AUGUST 1987

Report prepared for
Traffic Authority
of New South Wales,
and the
Federal Office of Road Safety
October 1987

Chief Investigator:
Associate Professor Philip Bell

Research Assistants:
Ms Anne Ross-Smith
Ms Fiona Mitchell

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Mr David Clark-Duff of Mass Communications, School of English and Linguistics, Macquarie University, supervised the very considerable task of recording the 380 hours of television programs analysed in this study.

Ms Anne Ross-Smith and Ms Fiona Mitchell have worked cheerfully through the many hours of material and Ms Jennifer Newton has promptly typed the manuscript.

To them, and to Dr Shashi Ravinder of Traffic Authority of New South Wales with whom I have liaised during the preparation of the report, my sincere thanks.

Philip Bell

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EXECUTIVE SUMMARY

This study analyses the way Australian television represents traffic-related incidents. It focusses on programs watched by school-age children and describes the nature and frequency of those incidents from which children might possibly learn about road safety.

As there is considerable evidence of social learning through television, and as Australian children suffer very high death and injury rates as a result of road accidents, the possibility that television might, currently, provide negative models for children in the area of vehicle use and road safety warrants empirical investigation. Television programs might, ideally, present positive rather than negative images, models and information to children, of course, although the meagre evidence available suggests the contrary. No Australian research addresses this question, so there is no objective data base from which relevant authorities can act in making representations to media organisations, education, advertising or health interests.

This study sought to provide such data by analysing five weeks of television programs watched by large audiences of school-age children. It sought to answer the following questions:

Generally, how are traffic incidents depicted on Australian television in programs viewed by significant numbers of children?

Specifically,

(i) What types of traffic or road use activities are shown on television, with what frequency?

(ii) Who is involved in these? (i.e., are children, adults, "heroes" of respective programs depicted, and in what roles?)

(iii) Are the driving, cycling, pedestrian and related activities depicted, dangerous or safe, and how frequently are outcomes such as accidents or punishments shown in relation to dangerous practices?

(iv) What is the country of origin of those programs depicting significant frequencies of traffic-related incidents?

(v) What types of programs show what types of traffic-related incidents? What audiences watch such programs?

(vi) What is the setting (e.g., urban/rural) for such incidents on television?

Such quantitative questions lead inevitably to issues concerning the quality of the often complex traffic-related incidents and issues which television fiction and news depict.

380 hours of Australian television programs watched by significantly large numbers of children were analysed to determine the frequency and nature of representations of traffic-related incidents.

School-age children watch approximately three hours of television per day, mostly in the late afternoon and early evening. Therefore all ABC and commercial programs screened between 4.00 and 8.00 p.m. were analysed. Several aspects

of traffic-related incidents were coded and quantified: program genre (type); time of broadcast: nationality of production; persons (age/gender) depicted; "heroes"/"villains" depicted; whether driving, cycling, motorcycling or pedestrian behaviour was depicted; whether an incident showed dangerous practices, explicitly safe practices, or the occurrence or aftermath of an accident; and the settings of incidents depicted.

The study analysed only those "focussed" traffic-related incidents which constituted an integral part of a narrative or expository program.

Generally, traffic-related incidents were found to be more than twice as frequent in programs broadcast between 6.00 and 8.00 p.m. than in those between 4.00 and 6.00 p.m. However, children in fact watch more television in the later period, and the notion of "children's programs" based on time of broadcast is misleading. Audience ratings figures show that early evening broadcasts (including news, soap operas and "family" adventure series) are the most popular with school-age viewers.

Despite the lower frequency of incidents in the afternoon period, of those shown, more are likely to depict danger or accidents. In the pre-6.00 p.m. period, traffic incidents are most frequently found in adventure, comedy, music-video and children's magazine programs. Cartoons shown between 4.00 and 5.00 p.m. are relatively free of incidents but *Inspector Gadget*, which rates very highly with children, includes very many dangerous incidents and

accidents despite occasional lip-service to road safety (it screens 6.00-6.30 p.m.).

In evening programs generally, news, news magazine, crime and soap operas show significant rates of incidents.

In all programs, the predominant type of activity depicted is driving which is also the most dangerous activity. Dangerous incidents occurred up to seven times per hour (in *Inspector Gadget*) and were high in adventure (2-3 per hour) and in news (2.4).

Males, both young and old, predominate in traffic-related incidents on television. They outnumber females by nine-to-one, and are visible in dangerous incidents in a similar ratio. Heroes were almost invariably male. Heroes were predominantly shown in driving or motorcycling incidents which were frequently the medium of dramatic interest between them and the respective villains (in children's adventure, and in cartoon programs). Negative consequences of dangerous practices were virtually invisible in adventure and cartoon programs.

The prevalence of male heroes involved in dangerous incidents in which no negative consequences are shown suggests that audiences are being encouraged to identify with, and be gratified by, such behaviours.

In general, program genre, not national origin is the better predictor of the rate of dangerous traffic-related incidents, both before and after 6.00 p.m. Dangerous incidents are distributed in proportion to the amount of programming in the respective genres from the countries distinguished in the study (Australia, USA, UK). However,

local non-news programs show fewer accidents than do their imported counterparts. They also showed virtually all of the (very few) explicitly "safe" incidents recorded. Motorcycle incidents were unexpectedly common in adventure programs made in Australia for children, and many of these showed dangerous practices (although not with negative consequences). Before 6.00 p.m., both dangerous incidents and accidents were most frequently set in suburban, village, or rural locations. Motorcycle incidents were especially common in Australian, rural settings in the children's adventure genre. Evening programs mostly showed dangerous incidents in suburban and rural settings also, while accidents were mostly depicted in suburban locations.

Advertisements during children's programs frequently show vehicle use, as do program promotions broadcast before 6.00 p.m. The latter sometimes include dangerous incidents. Safety advertisements are rare outside 4.00-5.00 p.m., and are relatively unexciting and didactic compared to product advertisements.

Morning cartoon programs are up to twenty times more popular than other 7.00-10.00 a.m. programs. They include dangerous traffic incidents twice per hour. Pre-school educational programs showed virtually no such incidents.

In qualitative terms, vehicle use in cartoon and adventure genres may be more significant than its mere frequency suggests. Television presents a complex symbolic environment where road use is frequently dangerous, where males, both young and old, use vehicles as weapons, as toys, in pursuits, stunts and contests. Yet accidents are rarely

the consequence of irresponsible or dangerous practices, and any other negative consequences are invisible.

Accidents seem to happen to "someone else" (not the hero with whom the child viewer is identified), further distancing the consequences of dangerous vehicle use.

The report recommends that:

1. Road safety interventions be directed at specific genres of program both within *and* outside the "C" classification period of 4.00-5.00 p.m., including cartoon, adventure and news programs.
2. Promotional materials (PSAs) for road safety be developed which utilise the dramatic and iconographic conventions of the programs in which they are to be broadcast, and that these also be *active* and *targeted* at specific age and gender groups, especially those who watch locally produced adventure, game and "soap" genres.
3. The locally produced programs watched by large numbers of children be encouraged to *incorporate* appropriate positive road and vehicle use models. Women and girls should be equally visible with men and boys in such contexts.
4. Station promotions for news and other programs should not include dangerous or otherwise negative road safety incidents.

INTRODUCTION

This study describes aspects of the presentation of traffic, road safety and related issues on Australian television programs predominantly watched by children. Secondly, it presents data on the incidence of advertisements related to driving/cycling/road safety, etc., in such programs. As it is the initial study of these aspects of television programs it seeks to describe the general characteristics of dangerous and irregular traffic incidents in relation to program genres, broadcast times, program's national production origin, the involvement of heroes and other characters, as well as the prevalence of accidents.

Television has been identified as a significant source of social experiences for the developing child (e.g., Noble and Noble, 1987). Any child watching 18-22 hours of television per week, the average for contemporary Australia, will be exposed to literally thousands of representations of road traffic and related incidents, many of which will be dramatically "realistic" and/or visually spectacular and attention-getting for the child viewer. While the possible long-term effects of exposure to televisual representations of socially significant events should not be pre-judged, television can be seen as part of the symbolic, cultural environment through which children learn, at the very least, what is "normal", socially acceptable behaviour in given situations (e.g., Gerbner et al, 1980).

In their recent report, Noble and Noble recommend that:

> "An Australian content study is required to establish how driving and road safety issues are portrayed in the mass media.... That which is seen defines, in part, the realm of the possible in relation to road safety and danger." (p.86)

This study seeks to provide the empirical basis that the Nobles call for, by conducting a comprehensive, quantitative analysis of television representations of road safety and traffic incidents generally.

It is a truism that television *constructs* interpretations of the "real world" and does not merely "*reflect*" it. Whether one is watching fictionalised fantasy programs or the main evening news bulletins, the traffic incidents shown are essentially interpretations, or codifications, of the world - they are understood as such by viewers, yet they also provide "information", or incorporate assumptions about, the non-televisual world. Television helps to create a symbolic environment which, although never displacing the real on which it is based, may be highly significant in several ways: it may imply that the world is more or less frightening, unpredictable or unstable than viewers would otherwise believe (e.g., Gerbner, 1976); it may provide specific models for viewers to emulate, either in fantasy or in their actual social behaviour (e.g. Bandura, 1977); it may alter inhibitions about, change the (moral) values attributed to, certain pro- or anti-social behaviours.

Therefore, it is not necessary to believe in the simplistic causal power of television, nor to attribute all social ills to its pernicious influence, to allow the

possibility that television programs constitute part of the symbolic-social environment from which children develop knowledge of, and values about, the use of motor vehicles, road safety, and related socially significant behaviours. Of course, a child's experience of *real* traffic and road safety issues will be far greater than that mediated by television. Peer-group mediated knowledge and values, not to mention the behavioural *effects of using* public roads and footpaths, is likely to be much more significant than viewing similar incidents on television. The latter, then, should be seen as an extension of the former, and they may be significant in amplifying or reinforcing rather than in causing *ab initio* the knowledge which underpins traffic and road use by children.

This possibility is reinforced by the fact that television programs provide *strong opportunities* for identification by viewers with the protagonists (especially heroes/heroines) of narratives. Should these fictional models be shown habitually to indulge in, say, dangerous driving or pedestrian practices, the *quality* of the identification of the child viewer with the hero-model might render such incidents more salient than the child's real-life, more mundane experiences.

Secondly, in matters of safety, where lives are literally at stake, the conservative assumption that television is potentially significant as a source of information (as role-models) is warranted: to ignore such a ubiquitous dimension of children's cultural/social experience because of the absence of very precise,

compelling evidence of direct behavioural effects might be tantamount to irresponsibility on the part of those agencies involved in accident prevention. There is, at any rate, no compelling reason for assuming that television depictions of traffic incidents would have *no* direct, or at least, indirect, relationship to behaviour and attitudes. What this relationship might be depends in part on precisely *what is depicted* in the television programs watched by the developing child. Therefore, this report attempts to describe precisely the quantitative and qualitative characteristics of current television depictions of traffic-related incidents.

Very few studies have systematically analysed television traffic content, despite recognition of the need for such research (e.g., Fletcher, 1984). The most relevant comprehensive study, Atkin and Greenberg (1983), analysed 174 hours of US prime-time drama series, focussing on traffic incidents of five seconds duration. Incidents were classified as "irregular" or as "dangerous":

> "quick braking (sudden decrease in speed); quick acceleration (sudden increases in speed); tires screeching (loud noise made by tires, typically due to fast turns, acceleration, or skidding); brakes squealing (loud noise made by brakes or tires due to braking); weaving (erratic movement through traffic from lane to lane on the road); autobatics (stunt driving in which vehicles flip, spin, or leap in a dramatic fashion); leaving ground (where the vehicle loses contact with the pavement); leaving road (driving off the road surface to an unpaved terrain, such as jumping a curb or driving into the desert); aggressive driving (where the driver is intending to hurt another person); speeding (explicitly depicted movement of a vehicle, including police cars, at a rate exceeding the apparent speed limit); and other illegal driving (any violation of the driving laws, aside from speeding, such as reckless driving, driving on the wrong side of the

road, changing drivers while moving, and forcing a car off the road). These 11 acts were used to create an index of total irregular driving acts.

When a driving act produced a risk of harm to people, it was also coded in one of three categories: endangering passengers, endangering other motorists, and endangering pedestrians (in each case, people are put in some jeopardy of injury or death, even though actual harm need not subsequently occur). These three kinds of driving comprise an index of endangering acts.

The study found that, in the specific types of programs monitored, 7.44 irregular driving acts were shown on average in each hour. The five most prevalent acts were sudden braking, squealing brakes, screeching tyres, speeding and rapid acceleration. These were depicted at least once in each hour of broadcast programs. Driving acts which endangered people were present 0.7 times per hour, and death and injury were very rare (less than one per five hours).

Despite the commendable detail of this research, however, it offers little information of relevance to either Australian programs (i.e., made in, or merely broadcast in, Australia) or children's televiewing experience. Nor does it address television genres such as news, comedy, or cartoons which are, prima facie, sources of many traffic-related incidents. More generally, however, this type of study is of limited use for agencies wishing to develop intervention/education programs aimed at the child audience, for it does not address several general dimensions of televised traffic issues which are of obvious relevance to such programs: (1) which audiences watch the various types of programs depicting relevant incidents; (2) what are the production origins of particular programs (e.g., local, or imported and hence less answerable to intervention)?

The study reported here addresses these issues, but its methodology differs considerably from Atkin and Greenberg's due to its more general focus on the whole spectrum of children's television programs and its relevance to potential educational interventions within the Australian context.

METHOD

Content Analysis

In media and communication studies, content analysis refers to any quantitative, systematic analysis of objectively (or at least reliably) observable aspects of a corpus of material - how frequently certain words or news topics occur, how frequently and in what forms certain types of issues or incidents are depicted. Content analysis is not usually an hypothesis testing procedure (although it may be); rather it is exploratory and descriptive in most of its routine applications. It offers a systematic classification of one or more dimensions of manifest media content. In the present study, content analysis is intended to describe comprehensively the ways by which traffic (and road safety) incidents are depicted in television programs watched by significant numbers of children. By itself, content analysis does not indicate the *effects* of such material when viewed by the child audience. It is, however, a necessary preliminary stage in considering media effects in that it indicates what messages audiences are exposed to. As Noble and Noble (above) have shown, the ways children learn from television are complex, age-related and frequently indirect. Content analysis relates audiences to particular types of depictions of traffic-related incidents, suggesting the locus of causal relationships between representations and behaviour.

Questions Addressed

Using content analysis, therefore, this report addresses the following questions:

Generally, how are traffic incidents depicted on Australian television in programs viewed by significant numbers of children?

Specifically,

(i) What types of traffic or road use activities are shown on television, with what frequency?

(ii) Who is involved in these? (i.e., are children, adults, "heroes" of respective programs depicted, and in what roles?)

(iii) Are the driving, cycling, pedestrian and related activities depicted, dangerous or safe, and how frequently are outcomes such as accidents or punishments shown in relation to dangerous practices?

(iv) What is the country of origin of these programs depicting significant frequencies of traffic-related incidents?

(v) What types of programs show what types of traffic-related incidents? What audiences watch such programs?

(vi) What is the setting (e.g., urban/rural) for such incidents on television?

Such quantitative questions lead inevitably to issues concerning the quality of the often complex traffic-related incidents and issues which television fiction and news depict. These will also be addressed.

In addition, the programs monitored allow other questions relating to how advertisements and station promotional "spots" depict traffic-related incidents. As literally scores of advertisements and several station promotions (e.g., for the *evening news*) are screened during a typical afternoon on any commercial channel, the question of how this material relates to that within the programs is also addressed.

Programs and Audience Data

The most reliable commercial audience data for the Sydney region are produced by McNair Anderson Research. Data from survey 6, 1987 (July 26, August 22) were used for the selection of programs to be analysed. However, the detail provided by this survey is limited: it classifies its child audiences only in terms of age groups 5-12 and 13-17 years.

The programs listed below were included in the study which covered Monday-Friday, 4.00-8.30 p.m. on Channels 2, 7, 9 and 10 (Sydney) from 27 July to 28 August, 1987. In addition, the only morning weekday program watched by a significant number of children 5-17 years old, Channel 7's *Cartoon Connection*, was studied for one week. Programs and audience data are given for each channel in the following tables.

Weekday programs were chosen for analysis for several reasons. First, they include "C" classification programs; second, they include many Australian-produced programs; third, children viewing prior to 6.00 p.m. on weekdays are usually watching TV singly or with siblings or friends only, and are not present merely as part of a family viewing a program in which the child (especially 5-12 year olds) may not be interested (cf weekend sports viewing, for example); fourth, it can be assumed that both viewing habits and programming are more routinely predictable during weekdays; fifth, the logistics of monitoring continuously four channels for extensive week-end periods were prohibitive.

The programs monitored during the study are listed below by channel. The figures accompanying each are the average numbers of viewers in the two age groups classified by McNair Anderson Research for the ratings period nearest to the present study. Hence, the figures indicate, in absolute terms, the audience for each program as reliably as any data currently available.

TABLE 1(a)

AVERAGE AUDIENCE ('000) BY AGE GROUP - CHANNEL 2 (SYDNEY)
(McNair Anderson, August-September 1987)

TIME	PROGRAM	AUDIENCE '000s 5-12 years	'000s 13-17 years
4.00	*Playschool*	42	3
4.30	*Sooty/Mr Men/Bear and Tiger*	44	4
5.00	*Pals/Secret Valley*	44	4
5.30	*You Can't Do That on TV*	61	17
6.00	*Inspector Gadget*	92	15
6.30	*EastEnders*	19	11
7.00	*News*	11	4
7.30	*7.30 Report*	6	3

TABLE 1(b)

AVERAGE AUDIENCE ('000s) BY AGE GROUP - CHANNEL 7 (SYDNEY)
(McNair Anderson, August-September 1987)

TIME	PROGRAM	AUDIENCE '000s 5-12 years	'000s 13-17 years
4.00	*Wombat*	29	20
4.30	*Butterfly Island/ Littlest Hobo/ Rewind*	20	10
5.00	*Wheel of Fortune*	33	19
5.30	*Have a go*	59	34
6.00	*News*	32	25
7.00	*Terry Willessee Tonight*	31	25
7.30	*A Country Practice*/ Family Ties/Hey Dad/ Rafferty's Rules George & Mildred/Good Life/ Golden Girls*	64	41

*N.B. 75, 74,000 for *A Country Practice*

TABLE 1(c)

AVERAGE AUDIENCE ('000s) BY AGE GROUP - CHANNEL 9 (SYDNEY)
(McNair Anderson, August-September 1987)

TIME	PROGRAM	AUDIENCE '000s 5-12 years	'000s 13-17 years
4.00	*C'mon Kids*	15	15
5.00	*MTV Video*	17	26
5.30	*Benson*	15	16
6.00	*News*	30	37
6.30	*Willessee*	33	33
7.00	*Sale of the Century***	63	37
7.30	*Cosby Show/Who's The Boss?/ Matlock/Flying Doctors*	74	46*

**Cosby Show*: 68, 67

**Not analysed - no incidents

N.B. Variability high depending on particular show

TABLE 1(d)

AVERAGE AUDIENCE ('000s) BY AGE GROUP - CHANNEL 10 (SYDNEY)
(McNair Anderson, August-September 1987)

TIME	PROGRAM	AUDIENCE '000s 5-12 years	'000s 13-17 years
4.00	*Muppet Babies/Travellers by Night* (and others)*/Grizzly Adams*	15	5
4.30	*Wonder World/Grizzly Adams*	12	7
5.00	*Silver Spoons*	38	26
5.30	*Perfect Match*	20	30
6.00	*News*	24	34
7.00	*Neighbours*	112	94
7.30	*Football/Mother & Son/You've Got to be Joking/Cheers/ It's a Knockout*	50	35

Programs watched by the largest audiences of children in the two relevant age groups are given in tables 2, 3. These data show that "children's" programs are not principally those shown from 4.00 to 6.00 p.m., but include many "family" programs screened in the early evening. This is because the number of sets in use, the number of people watching, increases rapidly in the early evening, thereby increasing the absolute level of child viewing. The older group, it should be noted, is distributed more evenly across the four channels than is the younger group at any given time; and it is numerically smaller (or watches less television).

TABLE 2(a)

MOST WATCHED P.M. PROGRAMS,
SYDNEY REGION - MONDAY TO FRIDAY:
5-12 YEAR OLD VIEWERS
(criterion: 50,000+ viewers in age group)

		AUDIENCE FOR EACH 1/4 HOUR OF PROGRAM
1.	Channel 10, 7.00-7.30 (*Neighbours*)	111,000 112,000
2.	Channel 2, 6.00-6.30 (*Inspector Gadget*)	94,000 90,000
3.	Channel 7, 7.30-8.00 (*A Country Practice/ Family Ties/Hey Dad/*etc.)	65,000 64,000
4.	Channel 2, 5.30-6.00 (*You Can't Do That On TV*)	61,000 61,000
5.	Channel 7, 5.30-6.00 (*Have a Go*)	60,000 58,000
6.	Channel 9, 7.30-8.00 (*Cosby Show/Who's The Boss/ Matlock/Flying Doctors*)	56,000 56,000

TABLE 2(b)

MOST WATCHED MORNING PROGRAM
5-12 year olds

		AUDIENCE FOR EACH 1/4 HOUR OF PROGRAM
1.	Channel 7, 7.00-9.00 (*Cartoon Connection*)	89,000 100,000 113,000 111,000 99,000 83,000 41,000 29,000

TABLE 3

MOST WATCHED PROGRAMS, MONDAY-FRIDAY
12-17 year old viewers:
(criterion: 40,000+ viewers in age group)

		AUDIENCE FOR EACH 1/4 HOUR OF PROGRAM
1.	Channel 10, 7.00-7.30 (*Neighbours*)	94,000 95,000
2.	Channel 7, 7.30-8.00 (*A Country Practice/Family Ties*)	42,000 42,000
3.	Channel 9, 7.30-8.00 (*Cosby Show/Who's The Boss?*)	41,000 41,000

Limitations of Audience Data

The study focusses on *television program genre* (and therefore on popularity with child audience) as well as on *afternoon* (before 6.00 p.m.) *compared to evening* (6.00-8.00 p.m.) *programs*. For practical, educational initiatives it is program genres (cartoons, adventure-drama) and audience age/numbers considerations which are most significant. However, commercial audience surveys offer limited demographic information concerning Australian television audiences, distinguishing only 5-12 and 13-17 year-old age groups. Very young children (say, 3-4 year-olds watching "educational" programs) are ignored in the McNair Anderson surveys used in the present study. Two important consequences follow from this: (1) the psychologically significant age of 8-10 years (see Noble and Noble) cannot be precisely related to the audience data where the boundaries are 5 and 12 years; and (2) findings concerning many low rating programs may be more significant than the ratings suggest, simply because pre-school children constitute, in commercial terms at least, an unmeasured audience.

In other ways, however, the McNair Anderson data might be argued to *over*estimate the child audience for evening programs, including news. The overall audience for television jumps noticeably at 6.00 p.m., presumably as adult family members tune in to news broadcasts. The continued presence of children (and the new child viewers accompanying the adults) are, of course, counted in the

audience surveys. Yet this means that many child "viewers" of news and later programs may be so in name only, being present in the room in which adults are watching television but not themselves interested or attentive viewers. On the other hand, the surveys do show that 5-12 and 13-17 year-olds do switch channels in large numbers to follow certain genres: Channel 2's *Inspector Gadget* draws many viewers from the commercials (especially, one suspects, Channel 7's *Have A Go*). Tables 4(a) and 4(b) (in Appendix A) clearly show these aspects of the ratings data. It also shows that the gender of child audiences is not indicated in the McNair Anderson figures, so that any generalisations about the likely effect of programs on children will necessarily have to assume that such an effect is not specific to one gender.

Program Analysis

The period from 4.00 p.m. to 8.00 p.m., Monday to Friday inclusive, from Monday, 27 July, 1987, to Friday, 28 August, 1987, yielded 380 hours of programs for analysis. For reasons of technical failure during the final week of the five-week period, Channel 7 was not recorded for the complete period.

Two research assistants were trained to code the incidents represented in the recorded programs according to the following criteria. First, each incident was classified as either a "focussed" (salient) traffic-related incident or as a "background" incident, according to the definitions below. Only focussed incidents were included in the analysis. Following a training period during which the principal investigator and the research assistants independently coded, cross-checked, and discussed anomalous judgements, the coders recorded details of each incident on a coding sheet for each program monitored.

Definitions

Traffic-related incident:

Any sequence which showed (1) driving a vehicle, (2) riding a bicycle or a motorcycle, (3) pedestrians near or on public roadway or footpath, (4) some other vehicular machine (such as cartoon versions of futuristic "cars") in a recognisable traffic-related use, or (5) a preparation for travel via above means, or consequences of travel via above means (e.g., motor car racing drivers preparing to race or news pictures of road accident aftermaths), were classed as traffic-related incidents.

1. Any such incident was subjected to detailed analysis if it was *focussed* within the program in which it figured, but was not analysed if it was merely background or peripheral to its story or item, according to the following criterion: <u>The incident shown was a focus of the narrative or of the expository structure of the program</u> - i.e., it advanced, or was integral to, the story being narrated in fiction programs; or it was a significant part of a magazine item or news item (exposition) in the sense that its absence would alter the topic or interpretation offered in the item (this meant that it was also referred to in the soundtrack of the item).

2. If a traffic-related incident was *not* so focussed by the program (e.g., traffic shown in the background behind a news reporter, pedestrians or cars not involved in narrative actions in a drama program) it

was *not* coded in the content analysis. To code such peripheral, unintegrated or incidental depictions, and to count these as "incidents" would have resulted in very arbitrary measures of the significant depictions of traffic-related incidents on television.

3. Generally, incidents were considered to be about *one*, and only one, type of activity (driving, cycling, etc.), usually depending on the way the incident was shown (e.g., point-of-view, involvement of protagonist). But where, for example, a hero and villain were equally prominent in two activities, such as riding a cycle and driving in pursuit, this was coded as involving both activities.

Dangerous/Safe/Accident:

Dangerous: Driving, cycling or other actions which clearly violated rules of the road, or which involved risking vehicle or persons' safety (e.g., speeding, stunts, braking very suddenly) were judged "dangerous", as were all incidents the outcome of which was injury, accidents, or "near misses".

Safe: Focussed incidents which showed safe practices and drew attention to these in context were coded as "safe", thus distinguishing them from item which, although not involving dangerous actions, did not explicitly show (exemplary) safe practices.[1]

1. Items which explicitly showed sanctions against unsafe behaviour were classified as "safe" - i.e. on the basis of the overall "meaning" of the item, not just its principal overt action.

Accident: Focussed incidents showing an accident occurring or the aftermath of an accident involving people and/or vehicles. Many incidents, of course, involved both "dangerous" practices and showed an accident. Others only showed the aftermath of the latter.

Items which showed the use of vehicles in stunts were noted.

Hero/Villain:

Hero: "Hero" (including heroine) referred to the principal character(s) of a program, with which the audience might be assumed to identify (and could include anthropomorphised animal "characters").

Villain: "Villain" was any character (including some not-quite-human forms) who impeded or threatened the hero's progress and/or the resolution of the story.

Where a studio-based presenter of a magazine program was shown in a relevant incident, he/she was assumed to be the "hero" of that incident.

In news and news magazine items, "hero" referred to the reporter, or to the protagonist shown in the item as displaying commendable behaviour (bravery by policemen, skill by racing car drivers). Not all items therefore have a hero or a villain; some have neither, some one or the other.

Cartoon:

Animated story-based program of any duration (N.B. some, such as *Inspector Gadget* might be regarded as "adventure", others as comical in a more traditional sense. But all were distinguished as a class on the assumption that all viewers distinguish animation from photographic reproduction).

Documentary:

Program showing "factual" or actuality footage as its principal subject matter.

News:

As designated by the TV channels themselves - in the periods studied, this means all major evening news broadcasts.

News Magazine:

Programs which follow the news chronologically and expand on aspects of the day's news, or otherwise deal with social issues in magazine format (e.g., *Willessee*).

Children's Magazine:

Programs which present a number of topical "news" or environment-related items analogous to News Magazines above (e.g., *Simon Townsend's Wonder World*).

Games/Quiz:

Studio-based game and quiz shows, such as *Perfect Match*, *Sale of the Century*.

Adventure:

Fictional programs focussed on action-excitement generated by the exploits of a hero (e.g., *Sooty*, *Secret Valley*).

Situation Comedy:

(Series of) programs focussed on humorous depiction of conflicts, dilemmas of ordinary people in "ordinary" situations.

"Soap" Operas:

(Series of) programs focussed on interpersonal, emotional aspects of "ordinary" life.

Other:

Any program not classified as one of the above. In the period sampled, music (MTV) and the children's comedy program (*You Can't Do That On Television*), for example.

RESULTS

247 focussed traffic-related incidents were analysed in the 4.00-6.00 p.m. period, and 526 in the following two-hour period.

Of these, 95% of incidents from the earlier period, and 81% from the later, were classified as either dangerous, (explicitly) safe, and/or as showing an accident or its aftermath. The rest were neutral although focussed. Significantly, children's programs depict traffic incidents only about half as frequently as evening programs, but the incidents shown are more likely to involve danger or accidents. This is probably because children's genres (especially adventure) convey their stories through overt action more than do their adult counterparts. Had the single after-6.00 p.m. cartoon (*Inspector Gadget*) been included in the earlier timeslot, it would have accentuated this tendency.

Frequency of Traffic-related Incidents

The frequency of focussed traffic incidents is the most general measure of the visibility of traffic and road safety relevant issues in the television broadcasts monitored. Table 5 presents these data, classified by genre and by period of broadcast (before or after 6.00 p.m.). Note that not all genres are represented in both periods, and that some occupy comparatively few broadcast hours (Tables 1-3,

see pp.24-5). Nevertheless, for all but one genre (documentary) at least 10 hours of programs were monitored. Absolute numbers of incidents, however, do not reflect the relative concentrations of traffic-related incidents because of the different periods of broadcast programs in each genre. The frequency per program hour has therefore been calculated for each genre. Having regard to the relative sizes of child audiences (Tables 1-3) the following can be claimed:

In children's programs (before 6.00 p.m.), traffic incidents are most frequently found in adventure, comedy, music and children's magazine programs. Driving incidents greatly outweigh all others and are the most dangerous class. Children's cartoons (often in the 4.00-5.00 p.m. timeslot and directed at younger children) are relatively free of incidents and of dangerous incidents.

However, children watch more television in the 6.00-8.00 p.m. period than in the late afternoon (Tables 4(a) and 4(b), see Appendix A), and in the former period, cartoons, news, news magazines, crime and soap opera genres show significant numbers of incidents. Again, the predominant emphasis is on driving, which is again the most dangerous category.

TABLE 5

TRAFFIC-RELATED INCIDENTS
(all channels combined)

GENRE	DRIVING		CYCLING		MOTOR-CYCLING		PEDEST-RIAN		OTHER	
	No.	Rate								
4.00-6.00 p.m.:										
Cartoon	15	1.3	1	.1			1	.1	4	.3
Children's magazine	25	.4	10	.2	4	.1	6	.1	3	.1
Games/quiz	10	.3					2	.1		
Adventure	97	2.7	4	.1	16	.5	17	.5	5	
Other:										
Comedy	19	1.5			1	.1				
Music	7	.6								
6.00-8.00 p.m.:										
Cartoon	88 (*10)	7.2	4	.3	3	.2	5	.4	3	.2
Documentary**	2	2.0	4	4.0					2	
News	223 (*18)	3.2	9	.1	23 (*9)	.3	38	.5	10	.1
News Magazine	40 (*3)	1.1	2		7	.2	13	.4	1	
Crime	5	1.6	1	.3						
Adventure	6	2.4			1					
Situation Comedy	5	.4					1			
Soap Opera	16	.5	3	.1	5	.2	5	.2	1	

*Stunts

(**N.B. Unreliable due to only one hour of program.)

"Dangerous" Genres

Table 6 clearly shows that the most "dangerous" genres are cartoons (especially *Inspector Gadget*), news and adventure programs. (Documentary must be ignored due to its limited broadcast duration in the period studied.) Explicitly safe incidents were so rare as to be unnoticeable, occurring less than once every three hours even in their most visible genres (although their presence in children's magazine programs was supplemented by many safety advertisements (see Table 11, p.53)).

Generally, dangerous incidents occurred up to seven times in an hour of programming, although there was a very great range across genres (cf Atkin and Greenberg's USA study for prime-time adventure series in which seven incidents per program hour were observed). In many program types, virtually no traffic incidents were shown. The rate per program hour of incidents was calculated by dividing the number of incidents in a given class by the number of broadcast hours of programs in the given genre in the sample studied.

TABLE 6

TYPES OF TRAFFIC-RELATED INCIDENTS
(all channels combined)

GENRE	DANGEROUS No.	DANGEROUS Rate	SAFE	SAFE	ACCIDENT	ACCIDENT
4.00-6.00 p.m.						
Cartoon	19	1.7	1	.1	1	.4
Children's Magazine	26	.4	17	.3	1	
Games/quiz	12	.4	5	.2	12	.4
Adventure	108	3.0				
Other:						
Comedy	18	1.4	1		2	.2
Music	7	.6			2	.2
6.00-8.00 p.m.						
Cartoon	86	6.9	4	.3	16	1.3
Documentary*	7	7.0	1	1.0	1	1.0
News	170	2.4	11	.2	65	.9
News Magazine	26	.7			5	.1
Crime	4	1.3			1	.3
Adventure	5	2.0			1	
Sit. Comedy	4	.3			1	
Soap Opera	19	.6			1	

(*N.B. unreliable due to only one hour of program.)

Heroes

On the specified definition of "hero", it is clear that very many points of identification were shown in dangerous traffic incidents. The high involvement of male adult and child characters in traffic incidents is notable (see following section). Within the contexts of their respective programs, such protagonists were frequently the "hero" (point of identification, and, of course, distinguished from various "villains"). Heroes young and old figured in proportion to their general visibility in incidents classified as "dangerous". Although villains were also frequently shown in such incidents, there was no clear relationship between the status of a character as hero/villain and their meaning in the context of traffic-related incidents *per se*. Driving and motorcycling (whether dangerous or not) were the means to dramatic interest in the relationship between hero and villain, or hero and hero, and virtually every dangerous incident involved (male) heroes. On the other hand, only two accidents involved villains, whilst twelve involved heroes (who, needless to say, magically evaded the realistic consequences of such incidents).

On the (very liberal) criteria of "hero" adopted, nearly all incidents in adventure and cartoon series involve (usually as the, or a, driving agent) one or more heroes. As this is true of many dangerous incidents, it could be argued that the role models most visibly involved in such incidents are those with whom the child audience will most

probably be identified. The visibility of villains in such incidents is much lower (about one third as frequent), suggesting that many hero-danger incidents demonstrate negative practices which encourage audience gratification and that such practices are shown as a normal part of the heroes' behaviour (Tables 7(a) and 7(b)). Of particular significance in Table 7(b) is the high involvement of heroes in motorcycling and pedestrian (not merely driving) incidents classified as dangerous.

TABLE 7(a)

HERO/VILLAIN IN TRAFFIC-RELATED INCIDENTS
(all channels combined)

GENRE	HERO		VILLAIN	
	No.	Rate		
4.00-6.00 p.m.				
Cartoon	20	1.7	4	.3
Children's Magazine	37	.6	6	.1
Games/Quiz				
Adventure	99	2.7	26	.7
Other:				
Comedy	9	.7	2	.2
Music	6	.5		
6.00-8.00 p.m.				
Cartoon	86	6.7	30	2.4
Documentary	6	6.0		
News	96	1.4	17	.2
News Magazine	17	.5	3	.1
Crime	5	1.6		
Adventure	1	.4		
Sit. Comedy	5	.4		
Soap Opera	19	.6		

TABLE 7(b)

HERO/VILLAIN IN DIFFERENT TYPES OF TRAFFIC-RELATED INCIDENTS
(all channels combined)

	INCIDENT	DANGEROUS	SAFE	ACCIDENT
4.00-6.00 p.m.				
Hero	Driving	81	6	12
	Cycling	6	1	
	Motorcycling	29		
	Pedestrian	11	1	
	Other	7		
Villain	D	15		2
	C	3		
	M	10		
	P	3		
	O	4	1	
6.00-8.00 p.m.				
Hero	D	125	8	27
	C	11		3
	M	8		4
	P	9	1	
	O	6		
Villain	D	46		12
	C			
	M			
	P	2		
	O	2		

(N.B. One incident may include more than one hero or villain)

Persons Shown in Traffic Incidents

In pre-6.00 p.m. programs, adult males (usually drivers) and children (predominantly boys) from 5-12 years were the most visible types of persons depicted in traffic-related incidents. On the relatively strict criterion of whether a person depicted was directly involved in an incident, the following, very clear picture emerged concerning the televisual *dramatis personae* of focussed incidents involving dangerous practices or situations (Tables 8(a), 8(b)): males are overwhelmingly depicted in traffic incidents, with *adult* males overwhelming all other classes of participants. In explicitly safe incidents, however, almost identical numbers of male and females were depicted (although the numbers of incidents and people shown were both very small, being only about 5% as great as dangerous incidents). 5-12 year-old boys are shown relatively frequently, especially in driving and motorcycling incidents. In the late afternoon programs monitored, teenagers were not shown often in such contexts, teenage girls being virtually invisible. Similarly, females of all ages were almost never shown involved in, or in relation to, accidents. Virtually all of the 24 accidents shown in the period involved adult males. (Curiously, non-humans were relatively common in dangerous incidents also. These include animals, space creatures and other anthropomorphised "characters".)

TABLE 8(a)

NUMBER OF PERSONS IN TRAFFIC-RELATED INCIDENTS
(all channels combined: 4.00-6.00 p.m.)

		DANGEROUS			SAFE			ACCIDENT		
		SEX			SEX			SEX		
AGE	INCIDENT	M	F	O*	M	F	O	M	F	O
0-4	Driving		1		1	1				
	Cycling									
	Motorcycling									
	Pedestrian									
	Other									
5-12	Driving	32	16					2		
	Cycling	0	0		1	1				
	Motorcycling	20	7					1		
	Pedestrian	8	3							
	Other	4	3		1	1		1		
13-17	Driving	2								
	Cycling	1	1							
	Motorcycling	6	1							
	Pedestrian									
	Other									
Adult	Driving	140	5	13	5	2		17		
	Cycling	3	1		2	2				
	Motorcycling	19	1			3		2		
	Pedestrian	7	7	3	1					
	Other			6	1					

* O = non-human

In the evening period, a similar pattern was evident: again male adults predominated in dangerous driving and in cycling and pedestrian incidents. They outnumbered women nine-to-one in accidents. However, in the evening programs, fewer children are shown generally than in the afternoon with proportionately fewer involved in dangerous incidents. In the very few explicitly safe incidents in this period males outnumbered females two-to-one (Table 8(b)).

TABLE 8(b)

NUMBER OF PERSONS IN TRAFFIC-RELATED INCIDENTS
(all channels combined: 6.00-8.00 p.m.)

		DANGEROUS			SAFE			ACCIDENT		
		SEX			SEX			SEX		
AGE	INCIDENT	M	F	O	M	F	O	M	F	O
0-4	Driving									
	Cycling	1								
	Motorcycling									
	Pedestrian									
	Other									
5-12	Driving	1	10			1			1	
	Cycling	14	6					1		
	Motorcycling									
	Pedestrian	4	3		1	1				
	Other		1							
13-17	Driving	1	1							
	Cycling	4	2							
	Motorcycling									
	Pedestrian									
	Other									
Adult	Driving	218	25	14	13	3		45	5	1
	Cycling	8	4	1				1		1
	Motorcycling	24		4				6		2
	Pedestrian	36	28	1	1	3		1		
	Other		2							

National Production Origins

The distribution of "dangerous" incidents from afternoon programs produced locally and overseas is given in Table 9.

TABLE 9

ORIGIN OF TRAFFIC-RELATED INCIDENTS
(all channels combined: 4.00-6.00 p.m.)

PRODUCTION	HRS	D	C	M	P	O	TOTAL
Aust.	94.5	72 (0.8)	7	30 (0.3)	14 (0.1)	1	124 (1.3)
USA	70.5	37 (0.5)	1	0	13 (0.2)	9 (0.1)	60 (0.9)
UK	12.5	25 (2.0)	1	0	3	0	29 (2.3)
Other	12.5	18 (1.4)	1	0	0	0	18 (11.4)

D = Driving
C = Cycling
M = Motorcycling
P = Pedestrian
O = Other

Generally Australian programs show no more dangerous incidents than do those from other countries. However, every third hour of local programming shows a dangerous motorcycling incident, and dangerous driving incidents occur almost once every two hours on average.

Data for the 6.00-8.00 p.m. period were consistent with these findings, but the preponderance of news and locally-produced soaps makes comparisons relatively uninformative. Leaving aside *Inspector Gadget*, virtually all incidents were found in Australian produced programs in the evening period studied. There is, predictably, a high proportion of accidents in news and news magazine programs, but the only explicitly safety-oriented items (e.g., on random breath tests) were also shown in (Australian) news.

Dangerous incidents were distributed more or less in proportion to the amount of programming from the respective countries of origin. Genre, not nationality, appears to be a better predictor of the number of such incidents. However, only Australian-produced programs included explicitly "safe" incidents (16 in total). Secondly, Australian (non-news) programs could be argued to be less inclined to show accidents than either of their UK- or USA-originated counterparts.

It should be noted that, of the (few) accidents depicted, none showed the negative human consequences of the incident in a "realistic" (indeed in any) way: accidents did not lead to injury, punishment or death in the "children's" programs monitored (see later discussion). Secondly, motorcycle incidents are very common (given their actual frequency) in Australian programs. Many incidents involve trail bikes in off-road pursuits or "stunts" in the context of adventure stories. Half of all programs before 6.00 p.m. were Australian produced. All early evening news and news

magazine, and most soaps and drama series are also local. 85% of evening programs studied were Australian, and 70% of all programs

Settings

In non-news programs broadcast before 6.00 p.m., dangerous incidents tended to be located in rural settings (country roads, fields), although village, town and suburban settings were also common regardless of the type of incident depicted. Motorcycles (including "trail bikes") were especially common in Australian rural settings. Accidents were most frequently set in suburban streets, and usually involved cars or trucks where occupants tended to be relatively invisible. Cycling and pedestrian accidents are very rare, perhaps because visible injury (or at least explicit danger to heroes) could not be easily disguised in these cases.

As has been shown, explicitly (exemplary) safe incidents are rare, even in 4.00-5.00 broadcasts, but those which were shown were set in the studio (i.e., were didactic demonstrations) or, if not, were set in suburban streets. Tables 10(a) and 10(b) show the settings of dangerous incidents in all programs. Not all incidents' locations could be unambiguously specified from the visual information presented, so the data refer only to those incidents clearly set in an identifiable type of environment.

TABLE 10(a)

SETTINGS OF TRAFFIC-RELATED INCIDENTS
(all channels combined: 4.00-6.00 p.m.)

		DANGEROUS	SAFE	ACCIDENT
Urban	Driving	17		2
	Cycling			
	Motorcycling	7		
	Pedestrian	3	1	
	Other	1		
Suburban	Driving	35	2	6
	Cycling	3	1	
	Motorcycling			
	Pedestrian	8		
	Other	2	2	
Village/Town	Driving	36		8
	Cycling	1		
	Motorcycling	3		
	Pedestrian	14		
	Other	1		
Rural	Driving	43	1	3
	Cycling	6		
	Motorcycling	24	1	
	Pedestrian	7		
	Other	1		
Exotic	Driving	6		
	Other	7		
Studio	Driving		3	
	Cycling		3	

TABLE 10(b)

SETTINGS FOR TRAFFIC-RELATED INCIDENTS
(all channels combined: 6.00-8.00 p.m.)

		DANGEROUS	SAFE	ACCIDENT
Urban	Driving	60	3	18
	Cycling	7		
	Motorcycling	2		2
	Pedestrian	26	1	
	Other	3		3
Suburban	Driving	74	8	28
	Cycling	9		1
	Motorcycling	6		2
	Pedestrian	20	2	0
	Other	6		6
Village/Town	Driving	7		3
	Cycling	2		
	Motorcycling	0		
	Pedestrian	2		
	Other	1		
Rural	Driving	71		
	Cycling	5		
	Motorcycling	20		
	Pedestrian	9		
	Other	0		
Exotic	Other	1		

Program Title Sequences

In addition to the traffic incidents which were the foci of the respective programs, several children's programs also include still images or brief sequences of cars, motorcycles, etc., in their title presentations. These

promise the excitement of motorised action (e.g., *Secret Valley* or *Inspector Gadget*) or merely indicate the typical incidents which the program includes (*Littlest Hobo*). These incidents have not been quantified in this study, for they are not "focussed incidents" according to the definition being employed. Nevertheless, they exemplify the prevalence of vehicle use in action genres and, repeated regularly and frequently as they are, could be argued to confirm the association of driving or riding with action/danger/adventure in children's programs generally.

Road Safety and Traffic-related Advertisements

Children viewing television between 4.00 and 8.00 p.m. are exposed to many advertisements related to or featuring vehicle use, road safety, stunts, or promotions for news and other programs which feature vehicle use. Table 11 shows the frequencies of various types of advertisements (including program promotions) which are traffic-related in that they show vehicle use or pedestrian behaviour as a significant part of their message presentation. These represent approximately 5% of all advertisements. It is noticeable that, although most vehicle advertisements went to air after 6.00 p.m., many were shown earlier. In addition, ten advertisements (featuring exciting motor-racing sequences) for the Adelaide Grand Prix, twenty one for toys, and twenty eight news/program promotions were screened. Virtually all safety advertisements were screened

in the "C" classification programs during which audiences are comparatively low.

Table 11 suggests that safety advertisements reach relatively few children whilst cars, motorcycles and the active, exciting use thereof are shown more frequently to larger child audiences in the 6.00-8.00 p.m. period (see Tables 1(a)-1(d)).

TABLE 11

FREQUENCY OF ADVERTISEMENTS
FEATURING TRAFFIC-RELATED INCIDENTS
(all channels combined)

TYPE OF ADVERTISEMENT	PROGRAM TIME			
	4.00-5.00	5.00-6.00	6.00-7.00	7.00-8.00
News Promotions	8	9		4
Program Promotions	2	9	3	27
McDonald's Safety	43			
Cyclist Safety (including helmets)	24			
Other Safety	8	1	1	2
Guide Dogs	30	1		
Adelaide Grand Prix	1	9	1	2
Holden (Getaway)		6	17	16
Other Vehicles		12	58	34
Other (using traffic, vehicles, etc.)	5	15	78	51
Toys/Entertainment	15	6	8	4

Morning Television

Ratings data show that only Channel 7 attracts a significant audience in the period 7.00-9.00 a.m., Monday to Friday. Audiences (in '000s) are given in Table 12 for all channels, from 7.00-10.00 a.m.

TABLE 12

CHILD AUDIENCES FOR 7.00-10.00 A.M. PROGRAMS ('000s)
(Monday-Friday)

	CHANNEL 2		CHANNEL 7		CHANNEL 9		CHANNEL 10	
TIME	5-12 yrs	13-17 yrs	5-12 yrs	13-17 yrs	5-12 yrs	13-17 yrs	5-12 yrs	13-17 yrs
7.00	2		89	25	3	1	2	4
7.15	2		100	27	3	2	2	3
7.30	4		113	28	4	2	2	3
7.45	4		111	27	3	2	2	2
8.00	4		99	20	3	2	2	3
8.15	5	1	83	15	3	1	1	3
8.30	5		41	7	2	1	2	2
8.45	4	1	29	6	1		2	2
9.00	3	1	4	2	5	1		1
9.15	4	1	2	1	5	1		1
9.30	4	1	2	1	5	1		1
9.45	4	1	2	1	5	1		1
10.00								

The only programs watched by more than 5,000 children for any quarter-hour segment are *Sesame Street*, *Here's Humphrey*, and *Cartoon Connection*, the last being up to twenty times more popular with children than any other morning program. Its general rating of 8-11 makes it among the most popular of all daytime programs. *Cartoon Connection* does not consist entirely of cartoons, although these are its principal content.

For the purposes of the present study, only one week of morning television was monitored. In the absence of commercial audience data concerning under-five year olds, and given the relatively low audience, this period was studied only in a preliminary way.

In the limited period monitored, *Cartoon Connection* depicted 27 focussed incidents, including 5 accidents, 19 of the total being dangerous driving incidents involving one or more heroes. This represents a rate per program hour of two dangerous incidents. The origin of all cartoon incidents was non-Australian but the production of the program as a whole is, of course, local.

On the two Australian pre-school "educational" programs, sixteen focussed incidents occurred, only two of which were dangerous (both involving children). *Sesame Street* (USA) included three dangerous incidents, two involving both heroes and children. Such programs, therefore, are amongst the least important means for portraying traffic-related incidents.

Generally, morning television is significant only for its cartoon programs, all of the relevant material of which is produced overseas.

DISCUSSION

The quantitative data indicate how frequently particular types of incident are shown on television, but they fail to indicate the more abstract meanings which traffic-related representations may incorporate. Content analysis offers only limited ways of describing program content, and it makes no claim to showing how an audience might understand the general significance of media content: for example, how might the narrativised meaning of an "incident" be understood within its dramatic and cultural contexts? Does dangerous driving by a hero necessarily provide a negative role-model for a child viewer, or might not the connotations of this action (within the program's general structure) be modified, even reversed, by its context in certain cases?

Content analysis tends to decontextualise incidents and to classify them as though their meanings were determined entirely from relatively superficial aspects of their depiction. Yet watching an adventure drama, cartoon or the news involves actively relating incidents to story or to social/cultural knowledge external to the program. This is not to claim, however, that the quantity of incidents depicting dangerous practices involving "heroes" ought to be ignored, but it need not be assumed that a causal relationship exists between aspects of manifest content and behaviour which is simply proportional to the magnitude of the former. All that the content analysis presented in this

report shows is that television does depict incidents of certain kinds with a high or low frequency.

Having made this point, however, one might also argue that certain potentially significant *patterns of representation* have emerged from the quantitative data. Two possible patterns deserve attention:

(1) Cartoons and locally produced adventure genres frequently show dangerous practices, threatening and exciting incidents involving road vehicles, but little or no negative consequences of these: accidents involving injury or negative consequences are rare, legal or moral sanctions are irrelevant to the narrative significance of the incidents depicted.

(2) News and news magazine programs (all locally produced) show accidents and danger/threat frequently. Yet the accidents generally depict damaged motor vehicles, blood or skid marks on roadways, or reconstruct the conditions leading to an incident without relating the antecedent driving or pedestrian practices to their negative consequences. Emotionally disturbing some of these graphic aftermaths may be, but they are not incorporated into any concrete understanding of cause and effect.

It might be argued that the repetition of highly fear- or anxiety-arousing images of accidents in the absence of any precise information that such accidents are avoidable would lead to audiences fatalistically distancing themselves from the implications of such images. If accidents always happen to "someone else" (the anonymous victims on the news)

the audience may be invited to see road safety issues as irrelevant to its own actions, and it is highly probable that repeated, graphic depictions of the consequences of violent road accidents "immunise" people, including children, against relating such depictions to their own lives.

The complementary depictions of heroes driving, cycling or motorcycling in potentially dangerous ways but escaping virtually all negative consequences might reinforce the tendency for audiences to see "factual" depictions of accidents as distant and unrelated to their own lives, by repeatedly demonstrating that persons with whom audiences are emotionally identified do not meet the fates depicted for others (anonymous, often invisible, strangers) on the news: the "them" of accidents are not the "us" of exciting vehicle use.

Generally, then, television creates a complex symbolic environment in which vehicle use, road safety and related issues "make sense" as well as creating excitement, danger, fear, and vicarious victories over obstacles and villains.

Nowhere is the paradoxical nature of "safety" advice within such genres as obvious as in *Inspector Gadget*.

"Do As I Say"

Cartoons, it has been shown, rely on fanciful depictions of what (on a literal content analysis interpretation) are dangerous incidents. The very popular *Inspector Gadget* relies on just such incidents to entertain

its audience, but, occasionally it explicitly proffers road safety advice.

The inadequacy of its pro-social intervention is clear from a detailed account of the episode broadcast on 19 August, 1987 (ABC). Despite the hero mouthing platitudes about the need for careful driving, the episode depicted long stunt-like uses of Gadget's vehicle, an extended car-racing sequence, pursuits, sabotage of vehicles, and, generally, told its story of villainy defeated entirely through the use of vehicles as the media of the contest between hero and villain. It concluded with the good Inspector offering the following advice: buckle your seat belts (like racing drivers do); "don't drink strange drinks" before driving and don't bother the driver.

Given that the plot of the preceding episode demonstrated the harmlessness of ignoring such advice and offered a comically exciting identification with a "drunken" (but successful!) racing car driver, the advice might be gratuitous to say the least.

Although this example is extreme, it may be a metaphor for the inconsistent, paradoxical meanings of children's television generally. It suggests one of the difficulties of *verbal* intervention in the context of visually dramatic entertainment. As Noble and Noble state:

> "Given that children's comprehension of television is a slowly developing age related process, any road safety messages for children aged 6 and under would have to be very simple to be understood. Given also that children find it difficult to make inferences relating actions to consequences that are temporally apart, then even 8 year olds are unlikely to connect say, the consumption of alcohol in one scene to a car accident several scenes later. The continuous exposure of children

> from an early age to driving behaviour shown on television is likely to build up stereotypes of what this behaviour is like, with cartoons being influential in this. Such stereotypes are likely to be biased in particular directions, coming as they do in the main, from forms that are of the fast-paced action type, showing fast paced chase content. Up to about 9 years children are likely to evaluate programmes in a stereotyped way. It will probably not be until about 10 years that children begin to check television driving against real life driving, and draw comparisons between the two. Drawing up and implementing codes of driving portrayals may be part of the answer. While communicating with younger children presents a big challenge, perhaps challenging older children may be one way to communicate with them. ... perhaps a programme using quiz type formats, where children are asked to select the good road safety option, would be one way of presenting such information that involved the child." (p.47)

Positive models within non-cartoon (e.g., *Australian* adventure) series are also rare, the content analysis shows. Whether fantasy or "realistic", children's genres tend to depict very few negative consequences of irresponsible vehicle use. The potential for intervention in this area is greater than any other, although Noble and Noble's optimism may be a little high when they state:

> "The extent to which television content is seen to reflect the social reality of day-to-day life is very likely to influence what is learnt from television. If programmes are seen as possible, or probable then children can use such content as a basis not only for evaluating real life, but as a basis for their own behaviour. Thus the extent to which regularly appearing favourite familiar characters use seat belts, for example will make children more aware of their use in their own car experiences. In this respect home grown Australian products are likely to be more responsible than imported American offerings. The whole ethos of how to drive as portrayed in the neo-realistic crime adventure series, though seen by children as a "possible" reflection of reality, may not be a responsible one, given that many driving sequences show fast, dangerous car chases, without showing the consequences that would likely accrue in real life.... What does seem clear is that the inclusion of implicit road safety information in neo-realistic programmes that

> children see as reflecting reality is likely to be an effective way of getting such information across." (p.54)

The difficulty is, of course, that the "information" needs to be as attention-getting, as dramatically interesting, and as integrated into the adventure as the current representations of vehicle use with which it is to compete. Here the question is one of the *form*, not simply the frequency, of the positive information.

CONCLUSIONS

The "symbolic environment" constructed by television in the area of vehicle use can be seen to be complex, contradictory and enmeshed in more general cultural values: vehicles are weapons, status symbols, magical extensions of super-human powers, toys, and, sometimes mere modes of transportation. In children's fictional programs vehicles are driven by heroes who are nearly always males; they are used to compete, to pursue, and to threaten others on roadways which appear not to be used for routine transportation purposes. The precise frequency of technically dangerous or illegal driving incidents seems less important in this rich symbolic universe than the semantic and metaphorical meaning of "driving" in which *action*, by *males*, as a *means* to achieving a (narrative) advantage is commonly shown. If driving has *a* "meaning" in cartoon and adventure series, it is surely this.

Competing with such powerful, active connotations are the much less frequent, and less potent (in television terms) depictions of "safe" driving or careful seat-belt use and pedestrian behaviour. Both quantitatively and qualitatively, care, safety, caution and skill (which is not that of a stuntman), are relatively powerless against the active and powerful significance of driving for the purpose of advancing the hero's narrativised goals. In the flow of television's action, safety is an intrusion, an interruption which can appear alien to the general momentum of both particular programs and an afternoon's viewing.

Safety, caution, even normal, unobtrusive vehicle use is relatively uncommon in fiction programs including cartoons. Hence the unexpectedly high proportion of "focussed traffic incidents" in this research report which are explicitly irregular, illegal or dangerous. Vehicles are seldom just that in fictional entertainments - they are props which are used to further the action of the story, to add excitement to incidents, to demonstrate a hero's skills. They are frequently not, in a literal sense, "realistic", and the cartoon vehicles which magically transform themselves into weapons or aircraft demonstrate the dramatic meaning of vehicles in children's fantasy programs. Beside these, or as intrusive safety advertisements, "normal" vehicle use or road safety practice is incommensurate - it might be argued to bear little relationship to the dramatic uses of vehicles into which it intrudes.

In "interpreting" some of the empirical trends demonstrated in the quantitative content analysis, I am suggesting that the abstract *quality* of representations on television needs to be addressed as well as the quantity of isolated "incidents". However, the general picture of traffic-related incidents which the content analysis sketches in does provide a basis for specific recommendations for future action.

RECOMMENDATIONS

(1) It is clear from commercial audience data that children from five years of age principally watch programs outside the "C" classification period of 4.00-5.00 p.m.

Many of these popular programs are produced in Australia (including, significantly, the news) even if not all the material broadcast within them is locally produced (e.g., music videos, news accident reports, cartoons). Therefore, any road safety interventions directed at children should concentrate on the following periods and program genres:

(i) Cartoon programs linked in local studios, pre-school hours.

(ii) Game and quiz shows presented from local studios, late afternoon (5.00-6.00 p.m.)

(iii) Adventure programs, both "children's" and general which are Australian produced - e.g., *Pals*, *Secret Valley*, *Flying Doctors*, or similar.

(iv) News and, especially, news magazine programs, 6.00-7.30 p.m.

(2) The current advertisements (including McDonald's) promoting seat belt use, safe pedestrian practices, etc., should not be discontinued, but nor should they be seen as the only, or the ideal, mode of intervention by relevant authorities. They might well be extended, being broadcast beyond the narrow 4.00-5.00 p.m. "C" classification period. More appropriate and varied promotions could be developed which utilised the

dramatic and iconographic conventions of the various program genres in which they are to be broadcast. "Active" (e.g., contests, quizzes, viewer competitions) campaigns aimed at specific age groups would be a necessary part of any such program (cf Noble and Noble, 1987, p.54, pp.84-87).

Generally, given that specific program genres provide the role models and behaviour which succeed in achieving the heroes' ends, advertising needs to be as similar to such programs as possible, at least in its dramatic impact and in the options it provides for audience identification.

(3) If nine years of age represents a transitional phase for the comprehension of abstract value- and motivation-related aspects of television representations of the types of issues raised by traffic safety incidents (Noble and Noble, 1987) then effort needs to be directed to:

(a) assessing which programs are attractive to younger (5-8) and older (9-12) children, *why*, and how these programs could *incorporate*, as well as being interrupted by, appropriate (positive) road safety material. (The case of *Inspector Gadget* should be seen as a model of what *not* to do in this regard.)

Not only age, but gender is significant here. Women and girls need to be shown in active, skilful, positive roles concerning road safety and vehicle use in all program genres. Traffic-related issues are represented in such narrowly gender-specific ways that

special attention needs to be given to "re-empowering" the young female audience in relation to cartoons, adventures and games genres, in so far as these depict traffic-related incidents and issues.

(4) The use of program (including news) promotions within the 4.00-6.00 p.m. period raises the possibility that the channels are careless in not restricting anxiety-arousing and dangerous incidents to the evening, including news programs proper. The channels should be reminded (regularly) of the inappropriateness of displays of road carnage or James Bond driving stunts to children's program periods (i.e., to 4.00-6.00 p.m.), and encouraged to restrict such material in all programs with a significant child or adolescent audience.

"... Television ... shows(s) an ideal, but not exactly how to obtain or imitate it" (Noble and Noble, p.84). "Educational" initiatives need to address both the ideal(s) *and* specifically to present ways of obtaining these by imitation.

Television provides repeated and long-term vicarious driving experiences for children prior to their learning to drive. But the potential to learn from the box in the corner need not be a negative one: *positive* attitudes and behaviours could be seen as "normal" in the various genres discussed in this report. But that would require a change

in the meanings that currently are taken for granted about vehicle and road use in the fantasy world of children's television.

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APPENDIX A

McNair Anderson ratings figures for all program times included in study, all channels, ratings July-August, 1987; Table 4(a) and Table 4(b).

AUDIENCE COMPOSITION

THOUSANDS OF HOME AND PEOPLEVIEWERS

SYDNEY, MONDAY-FRIDAY

	ALL CH ALL PPL	CHANNEL 2						CHANNEL 7						
		HOMES	ALL PPL	MEN 18+	WOMEN 18+	TEENS 13-17	CHILD 5-12	HSE-WVS	HOMES	ALL PPL	MEN 18+	WOMEN 18+	TEENS 13-17	CHILD 5-12	HSE-WVS
4 PM	319	70	115	2	11	3	41	8	62	104	22	25	20	28	21
	324	70	117	2	11	3	42	9	62	108	23	28	20	30	23
	317	63	111	2	11	4	44	8	48	85	17	31	10	20	26
	319	60	108	3	11	4	44	8	48	87	18	32	10	19	27
5 PM	691	44	80	8	6	4	44	5	189	363	113	185	19	32	166
	731	44	80	8	6	4	44	5	197	382	121	191	21	34	172
	935	57	100	6	7	10	61	4	155	333	99	113	34	60	100
	947	57	100	6	7	10	61	5	155	334	101	113	35	58	101
6 PM	1615	100	190	14	17	16	94	15	205	443	181	193	25	31	180
	1629	99	187	15	19	15	90	16	206	447	184	194	26	31	182
	1548	57	101	22	40	12	20	35	206	454	195	192	24	32	182
	1541	56	99	22	41	11	18	35	204	452	193	191	24	33	180
7 PM	1806	115	207	97	90	4	12	93	215	457	181	205	25	30	194
	1811	115	207	98	91	3	11	94	213	453	178	203	25	32	191
	1631	136	251	124	117	3	6	116	232	501	150	223	42	65	193
	1615	136	251	125	116	3	6	115	230	494	147	221	42	64	191

McNair Anderson audience figures for period studied.

TABLE 4(a)

AUDIENCE COMPOSITION

THOUSANDS OF HOMES AND PEOPLEVIEWERS

SYDNEY, MONDAY-FRIDAY

	ALL CH ALL PPL	CHANNEL 9							CHANNEL 10						
		HOMES	ALL PPL	MEN 18+	WOMEN 18+	TEENS 13-17	CHILD 5-12	HSE-WVS	HOMES	ALL PPL	MEN 18+	WOMEN 18+	TEENS 13-17	CHILD 5-12	HSE-WVS
4 PM	319	36	55	7	17	12	13	12	26	45	10	12	5	15	11
	324	36	54	7	16	12	13	11	26	44	10	12	5	14	11
	317	41	61	9	17	14	14	12	35	60	16	19	7	12	18
	319	41	62	10	17	15	14	12	36	62	17	20	7	12	19
5 PM	691	60	104	31	32	20	10	27	80	145	26	42	25	38	34
	731	61	107	33	32	21	10	28	90	164	32	54	27	38	43
	935	93	181	64	83	11	11	74	161	322	103	158	30	20	137
	947	95	187	66	87	11	11	77	163	327	104	160	31	20	138
6 PM	1615	290	595	246	277	32	28	250	184	392	152	179	33	20	160
	1629	294	604	251	280	32	29	254	184	395	153	179	34	21	161
	1548	278	573	226	275	27	30	247	183	385	150	164	36	27	149
	1541	277	568	224	272	27	30	244	183	388	150	165	35	28	149
7 PM	1806	265	576	222	273	22	41	244	259	578	136	207	94	111	161
	1811	268	582	225	274	23	43	246	260	581	137	208	95	112	161
	1631	233	514	180	218	41	56	191	162	358	131	127	35	51	112
	1615	232	509	178	215	41	56	189	160	354	131	125	34	50	111

McNair Anderson audience figures for period studied.

TABLE 4(b)