

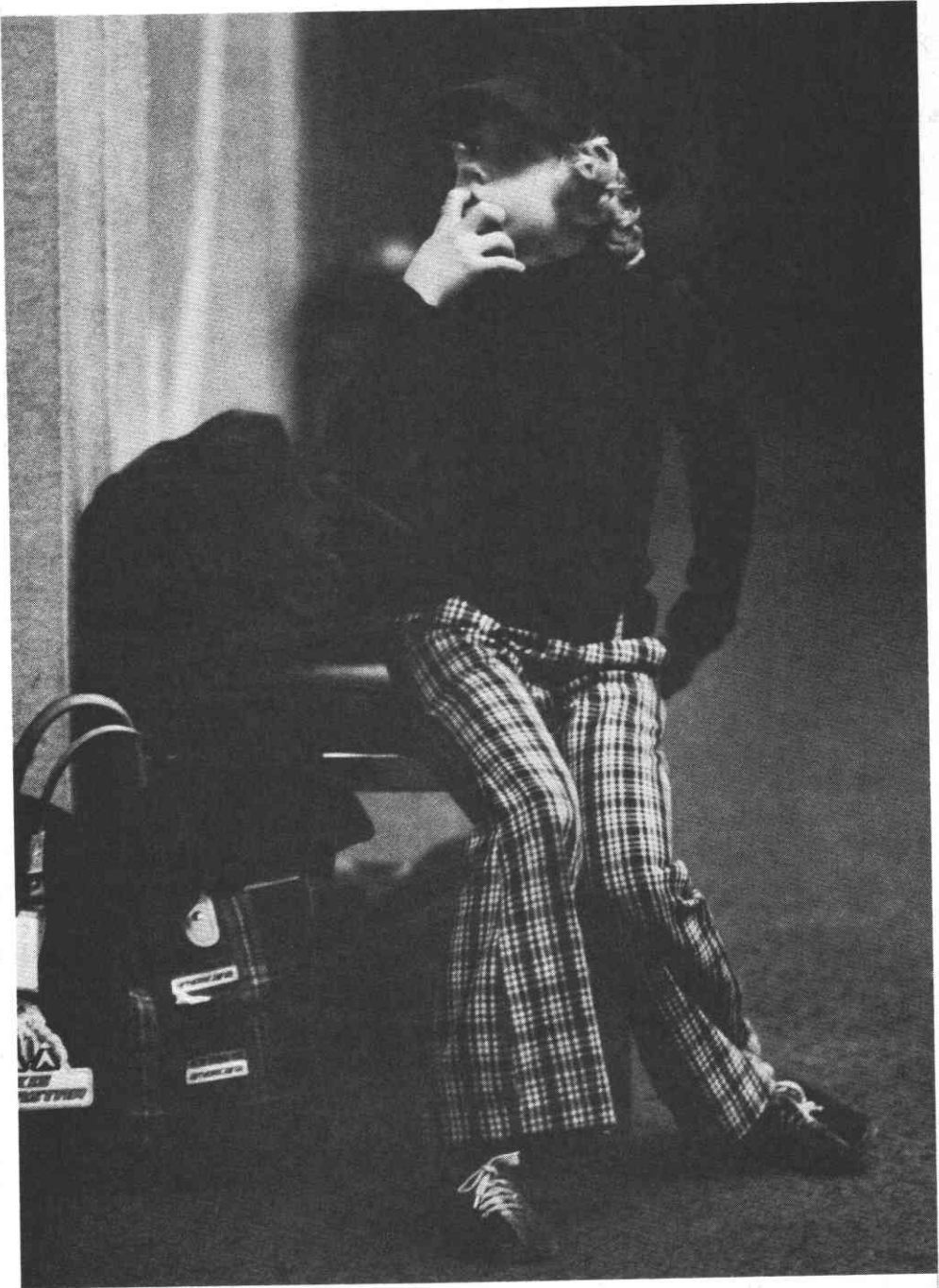


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"The fact that children are pictured so rarely in situations where they can demonstrate problem-solving ability in a realistic (non-magical) way deprives children of opportunities for identifying with and internalizing the image of a competent child" - Gwen Hamlin, Yona Nelson-Shulman, and Sheree West

Children's Television: An Environmental Learning Resource?

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ABSTRACT. This study was designed to explore the environmental information currently available on those television programs most frequently watched by children 2 to 11. The aspects investigated were: range and type of environments shown, relative proportions of time spent on interior and exterior scenes, and verbal expressions and actions related to the environment. Exterior environments were classified by topography, density of habitation, and land use. Saturday morning and prime-time programs were compared on these dimensions. All of the data were analyzed for environmental themes. Implications of the results and some directions for future research are discussed.

CHILDREN LEARN about their world in a variety of ways. Learning happens in countless environments: in the explicitly educational classroom situation, through direct personal action and experience in the world, and also through indirect, mediated experience. Television is one source of such indirect experience. Although its explicit function is most commonly entertainment rather than education, its potential for affecting viewers attitudinally, cognitively, and/or behaviorally has been established by recent extensive research on TV as a source of social learning (*Leibert, Neale, and Davidson 1973*). Our question in this research was: what is the potential for environmental learning through television?

Attitudes, expectations and information regarding human relationships with the land, with nature, and with the built environment are expressed constantly on television. Children can see different landscapes, and can learn (whether accurately or not) about various geographical regions of the world, as well as about natural and earth-science processes. Various types of built environments and the activities appropriate to them are shown. Children thus

have the opportunity to see a range of lifestyles and their environmental supports. All of these may contribute to an expanding internal representation of the child's world.

TV has been criticized as a passive medium, a one-way communication process which deprives children of the time and incentive to explore their own environment selectively and to learn by asking questions and receiving feedback (*Bettelheim 1960*). On the other hand, the characters and stories viewed on TV may spark an active and creative fantasy play in children at other times and places. Furthermore, TV may expose children to a wider range of action possibilities, general information, and environmental learning than they would ever have direct personal access to, thus expanding their cognitive options and potential modes of behavior.

The classic communication model provided the conceptual framework for our investigation of the potential contribution of television to children's environmental learning. The model sets up three distinct areas to be investigated: 1) the communicators and their intentions; 2) the message (i.e., program content); 3) the audience

and its reception and processing of the message. Clearly, any television program reflects the multiple input of writer, director, producer, network and sponsor, and their individual and collective values and vested interests as well as generalized cultural assumptions of appropriateness, aesthetics, and morality. This study touched on only part of the greater system at work. It was an initial attempt to deal with the second area of the available message, by isolating and analyzing the environments presented through this medium.

Our aim was to find out what environmental information is available to children on popular television. What programs do most children watch; what are they about; what kinds of environments are represented; and in what format? What uses are made of environments and what explicit references are made to environments that express underlying values and attitudes? What are the major themes dealing with environmental issues? Finally, what are the roles that children play in relation to their physical setting; how do they deal with environmental problems; and what environmental skills do they demonstrate that might be of instructional value to their viewers?

We supposed that conventional social assumptions about children and environments might be revealed by comparing Saturday-morning with prime-time programming. Is children's performance in various environments

handled differently when an adult audience is anticipated? Programs that are shown on Saturday morning are designed specifically for children, whereas prime-time programs (broadcast during the heavy-viewing hours from 8 to 11 p.m.) are aimed at adults as well.

METHOD

We used the Nielsen ratings for the first two weeks in January 1975 to determine which of the Saturday morning and evening prime-time programs were seen by the largest numbers of children. Of prime-time programs, only hour-long series were selected (table 1). Nielson estimates that 9 million children from 2 to 11 watch these programs regularly. We recorded a total of 20 viewing hours (10 from Saturday morning and 10 from prime time). We watched two episodes from each series and videotaped them for later analysis.

Each scene was described by reducing its visual narrative to a capsule scenario (scene changes were determined primarily by change of setting). With each change of setting, plot developments were noted. Setting was described in terms of location (e.g., California), topography (e.g., flat desert), land use/building type (e.g., commercial, low-rise) and degree of habitation (urban, suburban, rural, uninhabited). Frequently, settings were categoriz-

Table 1.—Programs viewed

Program	Format	Principal setting	Main characters (all animated animals are anthropomorphized)
SATURDAY A.M.			
Devlin	Animated	Nomadic (circus)	girl, teen boy, young man (siblings)
Hong Kong Phooey	Animated	Urban	dogs ^a , cat ^a , adults
Jeannie	Animated	Suburban	teens, female genie, immature genie
Land of the Lost	Live action	Artificial set: prehistoric jungle, caves	girl, boy, father
Pink Panther	Animated	Various and abstract	Panther, ant, aardvaark, anonymous humans
Run, Joe, Run	Live action	Nomadic	trained dog, male trainer
Shazam	Live action	Nomadic	teen young man ^a , older man
Sigmund and the Sea Monsters	Live Action	Artificial set: suburban beach and house	2 boys, older 'Aunt', sea monsters
Superfriends	Animated	Metropolitan, air, and underwater	2 children, assortment of super-heroes ^a
The New Adventures of Gilligan	Animated	Tropical island	young man, adults
EVENING (all are live action)			
Emergency	Adventure	Metropolitan	Male adults (public servants)
Little House on the Prairie	Family drama	19th century, prairie	nuclear family
Six Million Dollar Man	Adventure	Various international	male adult ^a
The Rookies	Adventure	Metropolitan	male adults (public servants)
The Waltons	Family drama	1930's, Virginia mountains	extended family with grandparents

^a Character with supernatural powers

ed on the basis of context, since the landscape was only glimpsed or was not in clear focus. Distinctions between suburban-commercial and urban categories were particularly difficult to make, as they are, in fact, typically blurred in American cityscapes. Other salient visual qualities (e.g., climatic conditions) were recorded and the setting was designated, whenever possible, as exterior or interior.

All verbal references to the environment (factual statements, emotional responses, puns, etc.) were transcribed, as were any salient actions upon the environment, e.g., carving initials into a tree. Each interior and exterior shot was timed to determine its respective contribution to the total time. Finally, themes and global messages emerging from a content analysis of verbal expressions and environmentally related actions or plot developments were noted and analyzed.

DESCRIPTION OF PROGRAMS VIEWED

Of the top 10 Saturday morning programs we viewed, 6 were animated and 4 were live-action productions. Three programs maintained stable settings, while the rest offered a wider variety of settings within and between episodes. Three programs featured characters whose nomadic lifestyles brought them to a new local each week. Only two programs were primarily urban. Four programs featured animals as main characters and four had main characters with some kind of super power.

All of the five prime-time programs viewed were live-action dramas, utilizing both locations and realistic sets. Three were action-adventure series, two of which were based in specific metropolitan areas. The third varied its location weekly, often suggesting international settings. The protagonists of these series were adult men.

The other two series were both rural, set in the past, and featured families with children.

Few programs showed children under 12. On Saturday morning, when programs are aimed specifically at children of that age, only 4 of the 10 regularly showed children as protagonists. Adolescents were shown in four others. Altogether, of the 29 episodes viewed, only 11 featured a child as a main character (7 of 19 on Saturday; 4 of 10 in prime time). Of the two evening series featuring families, children were central to the plot in two of the four episodes. Young people were shown in urban situations only twice, both briefly on Saturday morning.

RESULTS

Of Saturday morning program time, 59.2 percent was devoted to exterior scenes, while 40.2 percent of the time the action took place inside. The remaining 0.6 percent used abstract settings which fit into neither category. The percentages were reversed for prime time: 40.5 percent of the total were exterior scenes, while 59.5 percent were interior scenes (table 2). Much of the exterior time in prime time was devoted to quick establishing shots (5 to 10 seconds for a long shot or pan shots used to provide a frame of reference), or to what we came to call "in-transit" sequences. These were typically chase scenes, where the environment added to the sense of risk and suspense, or transitional scenes, which eased the flow from one set location to another.

Table 3 summarizes the exterior environments by general type of landscape on a rough continuum of density of habitation and type of land use. In the overall sample, the predominant landscapes (30.5 percent of total exterior time) were rural and sparsely inhabited, as exemplified by the dry scrub and grassy hills typical of southern California. The

Table 2.—Time spent in interior and exterior settings by Saturday and evening shows

Time period	Interior		Exterior		Other		Total	
	Min.	%	Min.	%	Min.	%	Min.	%
Saturday	161.19	40.2	237.54	59.2	2.48	0.6	401.21	100.0
Evening	283.03	59.5	192.28	40.5	—	—	475.30	100.0
Total	444.22	—	429.82	—	2.48	—	876.51	—

Table 3.—Exterior time devoted to landscape types in Saturday and evening hours

Landscape type	Saturday			Evening			Total exterior	
	Minutes	% of Sat. exterior time	% of total exterior time	Minutes	% of eve. exterior time	% of total exterior time	Minutes	% of total exterior time
Urban	10.47	4.4	2.4	21.20	11.0	4.9	31.67	7.4
Suburban commercial	6.74	2.8	1.6	14.87	7.7	3.5	21.61	5.0
Suburban residential	26.75	11.3	6.2	9.30	4.8	2.2	36.05	8.4
Small town/campus	0.6	0.4	38.00	19.8	8.8	39.51	9.2	
Rural/sparsely inhabited	45.31	19.1	10.5	85.73	44.6	19.9	131.04	30.5
Wild/uninhabited	71.21	30.0	16.6	10.40	5.4	2.4	81.61	19.0
Subtotal	161.99	68.2	37.7	179.50	93.3	41.7	341.49	79.5
Public recreational	27.25	11.5	6.3	9.38	4.9	2.2	36.63	8.5
Other surfaces (air, water, etc.)	34.12	14.4	7.9	.88	0.5	0.2	35.00	8.1
Not accounted for	14.18	5.9	3.3	2.52	1.3	0.6	16.70	3.9
(technical difficulties, etc.)								
Total	237.54	100.0	55.2	192.28	100.0	44.7	429.82	100.0

activities most frequently shown in these dry rocky hills were high action chase sequences. Rural scenes of ponds, woods, or dirt paths, on the other hand, were usually settings for social interaction and intimate encounters between family and friends. Wild, uninhabited landscapes were second in frequency (19.9 percent). Urban settings accounted for only 7.4 percent of the total exterior time for all programs, and suburban commercial strips were seen least (5.0 percent).

The Saturday morning programs showed a much greater variety of landscape types, including more exotic and wild, uninhabited regions; e.g., deserts, mountains, tropical islands, jungles, etc. Often these settings served as remote or mythical supports for events more freely fantasized than those usual in evening programs. Most prime-time exterior scenes (93.3 percent) fell into one of the six density/land use categories shown in table 3, as did a smaller majority (68.2 percent) of the Saturday morning landscapes. Not all scenes could be categorized along those dimensions, however: 8.5 percent of the total exterior time showed public recreation settings, e.g., racetracks, fairgrounds, zoos, and stadiums. Of this category, 74.4 percent was contributed by the Saturday morning programs. Other surfaces, e.g., air, water, underwater, etc. accounted for 8.1 percent of the total exterior time, with 97.5 percent of that category attributable to Saturday morning programs.

On Saturday morning, the predominant category was wild, uninhabited landscape (30.0 percent of Saturday exterior time). The next most frequent was rural, sparsely inhabited (19.1 percent), followed by suburban residential (11.3 percent). Urban exteriors accounted for only 4.4 percent of Saturday time, with small town/campus appearing least often (0.6 percent).

The predominant landscapes in prime time, on the other hand, were rural, sparsely inhabited (44.6 percent of evening exterior time), and small town/campus (19.8 percent), contributed primarily by two programs—*The Waltons* and *Little House on the Prairie*—which feature the same rural locales each week. Urban landscapes were third in amount of evening exterior time at 11.0 percent. Wild, uninhabited landscapes (5.4 percent of evening exterior time) and suburban residential exteriors (4.8 percent) appeared least frequently.

Four of the most frequent environment-centered themes are discussed below with brief illustrative references from the specific programs in which they appear.

Being marooned, lost and/or isolated—generally as the result of some natural disaster—provides the *raison d'être* and continuous plot line for the two most popular (according to a recent Nielsen statistic) Saturday morning programs. In *The New Adventures of Gilligan*, a shipwreck has left an odd assortment of people

stranded on an island, which provides a physical context for weekly adventures and mishaps. In *Land of the Lost*, a father, son, and daughter find their camping trip disrupted when an earthquake catapults them into a prehistoric time dimension. One episode of *Devlin* dealt with the experience of being trapped in a narrow mountain pass by an avalanche that followed an unexpected blizzard. In both *Devlin* and *Land of the Lost*, the environment is depicted as hostile and threatening, requiring the protagonists to muster their resources in dealing with the challenge of the situation. The characters in *Gilligan* also cope quite successfully with the situational demands of their island existence, but the environment is seen as more supportive, adding credence to the myth of easy and bountiful living on tropical islands.

A number of environments evoked responses of aesthetic appreciation. In *Shazam*, Mentor and Billy admire the tranquility of their mountain surroundings: "...especially up here where it's so peaceful and quiet." Sandy, in *Devlin*, is awe-struck at the same mountain snowfall which unnerved her older brother: "It's beautiful—look, it's snow...Like a kid's fairy tale!" Francie, in *The Rookies*, reminisces about "just walking through the park—it was beautiful, really beautiful." Most notable of all is 8-year-old Laura's soliloquy while fishing with her beloved Johnny: "What a pretty song. Squirrels playing and fish jumping—this is such a cheerful place. At times like this, I feel all warm and sparkling inside" (*Little House on the Prairie*).

Environments were also seen as refuges where people go to elude their pursuers. Although the rural, sparsely inhabited landscape often provides this escape, e.g. fleeing to the hills to escape police (*The Rookies*), the urban environment also provides multiple opportunities for flight and retreat. Microenvironments are often used for this purpose, e.g. hiding in alley trashcans (*The Waltons*) and in the doorways of dimly-lit urban streets (*Six Million Dollar Man*) as well as losing oneself in downtown traffic to shake off the police (*The Rookies*). Some imaginative hiding places included a tennis court, a filing cabinet, an underwater algae forest, the inside of a dam, and a clubhouse.

The clubhouse represents a subcategory of this major thematic element, since it is not only

a refuge where two boys hide their sea-monster friend, but it is also a private place where the boys can meet and plan in secrecy without fear of intrusion from the adult world (*Sigmund and the Sea Monsters*). Interior settings are not the only places where people seek and find privacy: "Let's go outside where we can be private," says a character in *Little House on the Prairie*. Closely related to private places are settings for confidential talks, which range from conventional interiors, e.g. bedrooms, to the front steps of houses and schools, and very often to natural settings, e.g. gardens, ponds, waterfalls, dirt roads, and trees.

Another major theme that overlaps considerably with the concept of environment as refuge is the theme of running away. This category includes not only the characters who are fleeing from the police in various episodes of *The Rookies*, but also situations where children or animals run from a place of security and close familial ties to strange and unfamiliar places that demand rather complex adaptive strategies. Joe is the fugitive dog in the series *Run, Joe, Run* who is erroneously thought to be dangerous and must constantly flee his pursuers in alien terrain. In an episode of *The Waltons*, When Jim-Bob, the youngest boy in the family, feels ignored and misunderstood, he runs away from his rural home to the next town, where he attempts to buy a train ticket for "Japan or Washington". One segment of *Jeannie* features Babu, a genie, who thinking himself jinxed, runs away from his suburban home to a more rural setting where he encounters some unfriendly strangers. In all instances the runaways are sought by concerned family and friends and entreated to return home. Going home is, of course, the thematic counterpart to running away or getting lost — and the warm and supportive qualities of home are strong underlying themes in at least three series: the title of *Little House on the Prairie* physically describes the locus of the Ingals' homestead; Walton's Mt., Va. is where *The Waltons* live and work (most significant action takes place in and around the house in these two cases); and the sole objective of the family stranded in *Land of the Lost* is to return home. In each of these programs, the physical environment clearly shapes the lifestyle pictured.

Frightening and dangerous places often figure into the plots to create an atmosphere of

tension, adventure, and excitement and provide a context for displays of bravery and risk-taking, hence the final theme focuses on demonstrations of environmental competence. In only three episodes are children actively dealing with their fears and coping realistically with situational crises. Holly, the young girl in *Land of the Lost*, and Chad, a blind boy in one episode of *Shazam*, manage to rise above their handicaps and the overprotection of well-meaning adults by rescuing others whose lives are endangered. Most of problems faced by television characters, however, are dealt with by adults — many of whom are also equipped with super powers. In fact, out of 29 episodes, 10 featured characters with superhuman powers — none of them children. Implications of these findings for the development of environmental competence in children will be discussed in the next section.

DISCUSSION AND FUTURE RESEARCH

These results reflect general social attitudes about children and current programming theories as well as the different potentials for environmental learning inherent in the formats of evening and Saturday morning programs. One convention that appeared consistently is the placement of children in natural settings. Perhaps our cultural mythology perpetuates the notion of a link between the characteristics stereotypically assigned to children—simplicity, openness and uninhibited behavior—and the undomesticated outdoors. Our society has conventionally thought that the “natural” environment is the most suitable arena for a child’s play and exploration and that the child should therefore be happiest in such a context. The city is seen as inimical to children in the harshness of its build environment. Restrictions are imposed by adults because of perceived physical and social dangers. In the television programs we monitored, we saw no children demonstrating skills or coping with problems in urban settings, although other characters that children may or may not identify with (animals and older adolescents) were occasionally seen acting in urban scenes.

The fact that children are pictured so rarely in situations where they can demonstrate problem-solving ability in a realistic (non-

magical) way deprives children of opportunities for identifying with and internalizing the image of a competent child. Super power and technological intervention as the usual means of problem-solving on these TV programs may reinforce the child’s notion of finding magical rather than skill- or initiative-derived solutions to ecological problems.

Such conventions about a child’s relationship to the environment and the expectations of his performance within that environment emerge fairly consistently in both Saturday and prime-time programs. The differences between the two are largely in the kinds of environments shown and the kinds of action that take place. These differences probably reflect the anticipated differences in viewing audiences.

Exterior environments provide the potential for a great variety and quantity of action. It is known that action is a prime ingredient in holding children’s attention to the screen (Liebert, Neale, and Davidson 1973). On Saturday morning, mythical or remote exterior environments were often settings for that action and adventure. In prime-time shows, most of the fast-paced action sequences again take place outside, but verbal dramatic developments, perhaps of more interest to adults, are usually set indoors.

Since children do watch both Saturday morning and evening programs, the differences in settings may communicate conflicting images of the wider world beyond home. On Saturday morning, events that are exciting, adventurous, or challenging usually happen in exotic foreign places, in wild uninhabited places, or at least in places outside the home. While the situations that develop may or may not be realistic, they present an intriguing view of a world larger than that experienced by most children, or even most adults.

The evening programs we viewed split into an interesting dichotomy. On the one hand, there was a melange of violent, criminal and/or institutional processes generated in an urbanized world in which men were the main participants. On the other hand, programs featuring family life are set in the past and depict ‘home’ as a secure rural haven. Do children infer from this that the city is a frightening, dangerous place unsuitable for children and a secure home is only a remnant of our rural past?

Furthermore, what notions of lifestyle are

children absorbing? Several Saturday morning shows support the American romance of nomadic or highly mobile lifestyles inviting exploration of unknown environments. Some evening programs, on the other hand, reinforce the value of a stable, rooted home environment. The presentation of lifestyles in the context of certain environments, e.g., conventional suburban settings or nostalgic rural settings, may contribute to idealized images and expectations of how one "should" live and of options other people enjoy. It is possible that the comparison of his or her own lifestyle with those shown on television may contribute not only to the child's learning about the world but also, by reflection, to an emerging self-definition.

We should note that although Saturday morning shows often depicted more unusual environments, the "created" (drawn or modeled) settings were (with a few exceptions) highly stereotypic, abstracted representations of the suggested environments. If these are informing a child's image of parts of the world, it is on a highly generalized level. The "live" locations of evening programs, on the other hand, provide incidental information about more ordinary environments in much greater detail. For many young children, even these "ordinary" environments are different from anything they have experienced, and thus may be a source of environmental learning.

Although the settings of the evening programs were more detailed and realistic than most Saturday morning settings, landscapes were often viewed in glimpses. The scenes were short, and the screen was filled almost entirely by close-ups of people, car interiors, etc. Landscapes were often more suggested than shown, seen in fragments out of car windows, or blurred by panning or a shallow depth of field. One reason that so much of the landscape was seen in glimpses and fragments was the great amount of time spent in vehicles and on the streets. We are reminded of recent discussions of landscapes seen from moving vehicles and the educational and orienting functions that could be served in real urban landscapes by the different perspectives available in a trip through the city (Appleyard, Lynch, and Myer 1964; Carr and Lynch 1968).

In a sense children are carried as passively through television landscapes as they are in vehicles, but the images on television are even

less connected and the scales of environments change much more abruptly in adjacent scenes of TV programs. The choice of perspective is also not available to the viewer of a television scene as it is to the car passenger. Learning to integrate different scales and perspectives of environment-landscape into a coherent image is a cognitive task which children achieve with varying levels of competence at different stages of development (Hart and Moore 1973). Future research should investigate the child's ability to integrate individual scene pieces into a unified image of a landscape based on the context of the program and to identify a type of landscape, as well as its region or place in the world.

This study has approached only one phase of the communications model, the message content. The other two facets, the choices and intentions of the producers of the message and the manner in which the information is assimilated and incorporated by child viewers, must also be investigated to elucidate the process of children's environmental learning through television. This conceptual and methodological approach is equally applicable to other popular media, e.g. movies, comic books, advertising, music, etc.

It is our hope that this presentation will spark an interest in media-based environmental learning. Decisions about environments are made by and for people who environmental attitudes and values have been shaped not only through formal education and direct experience but also through indirect and informal resources.

Acknowledgments

We thank Ronald R. Erickson of the City University of New York for his invaluable technical and conceptual assistance on this project.

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