MULTIMEDIA RESEARCH

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Evaluation of
Journey to Planet Earth: The Urban Explosion Video

Report for
Screenscope Inc.

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To provide feedback during the development of a second series for "Journey to Planet Earth," an evaluation of one finished program in the first series was carried out with two different samples: an adult PBS-viewer sample and a upper middle school sample. The former sample represents the traditional audience for an environmental series. The latter sample was included to explore how the video series appeals to and is understood by the age group for which the outreach efforts are planned. The general goals for the research were as follows:
- reaction to the program overall with respect to various production qualities;
- assessment as to what was liked and not liked;
- general learning outcomes;
- perceived achievement of program goals;
- preference for proposed locations for the future three programs in the series.

Sample

Small groups of adults viewed and responded to the video in equal numbers in exurban Portland, OR; suburban Minneapolis, MN; rural Milford, DE; and urban North Miami, FL. Eighth grade classes were recruited at five sites: OR; DE; FL as well as exurban Philadelphia, PA, and suburban Chicago, IL.

The total sample of 159 included 43 adults and 116 students. In the eighth grade classes, the student sample included 54% females and ages 13 (61%) and 14 (39%). Three-quarters of participants were white (adults, 72%; students, 72%); minorities included Hispanic/Latino, Black and Asian.

The adult sample included 49% females. Adult ages ranged from 25 to 77 years old, with a mean of 41 years. Of the 34 working adults, 50% had professional occupations, 26% had skilled occupations, and 24% had semi- or unskilled occupations. Of those who worked, 47% felt that they needed an understanding of science in their employment.

Procedure

Over 57 minutes the video *The Urban Explosion* "journeys to four mega-cities to investigate a major challenge of the 21st Century: how to shelter and sustain the world's exploding urban population without destroying the delicate balance of our environment." Air, water and waste problems and solutions are presented for Mexico City, Istanbul, Shanghai and New York City.

Adults viewed the videotape in small groups of 5-6 each during a 90 minute session, whereas students viewed in their classroom setting in one 80 minute session. Following the viewing, written questionnaires asked about the research issues. Adults also participated in a short discussion about future programs.

Data were examined for statistically significant differences within the adult and student samples for all demographic variables (gender, age, ethnicity, occupational status). Only differences significant at the $p<.05$ level are reported in the text.

Adults liked the program overall, with 84% giving it high appeal ratings. They also rated the program highly for clarity, visual interest, informativeness, content interest and personal relevance. The adults felt there was just enough information presented but also thought the program was a little slow, focusing on problems with the narrator and the narration.

Eighth graders were much less positive about the program overall, with only 53% rating it highly in terms of appeal. Students felt the content was mostly clear and that they learned from the program; however, on average, they rated the content and visual presentation as neutral in interest level and rated the program as somewhat low in relevance to their own lives. Like the adults, students felt the information provided was sufficient but the program was too slow in its pace.

Immediately after viewing, respondents rated the program as a whole for certain qualities on the scale of 1 to 5. The table below presents the mean ratings for each pair of descriptions, ordered according to the adult means. Student mean ratings are in [brackets].

Table 1. Mean Ratings of Program Qualities for Adults (N = 43) and Students (N=116)

	1	2	3	4	5	
Confusing content				[4.1] 4.4		Clear content
Disliked the video			[3.5]	4.3		Liked the video
Visually boring			[3.3]	4.3		Visually interesting
Learned nothing			[3.8]4.2			Learned a lot
Boring content		[3.1]	4.1			Interesting content
Not at all relevant to my life		[2.8]	4.1			Very relevant to my life
Too little information	3.1 [3.5] = Just enough information					Too much information
Too slow	[2.2] 2.7 = A little slow					Too fast

Table 1 shows that the adult sample was quite positive in the ratings of various aspects of the program, although on average, the adults felt the program was "a little slow" (mean = 2.7; discussed in more detail below).

The adults liked the video, providing a mean rating of 4.3, with 84% giving it a "5" or "4" rating. Goodman Research Group also evaluated "Urban Explosion" after broadcast (July, 1999), gathering appeal ratings from 24 adults on a five-point scale of "poor, fair, good, very good, excellent." Translation of the Goodman scale to the scale in Table 1 of "disliked–liked video" yields a mean appeal rating of 4.4 and 88% giving a "5" or "4" rating. The Goodman results and those in this evaluation are consistent.[1]

"Liking" the video increased significantly as age increased for our adult sample. For those giving a "3" appeal rating [liked; disliked], the average age was 34 compared with 44 for those giving a "5" rating. Those who liked the video more were also more likely to rate higher the aspects of content interest (r_s = .66); learning (r_s = .45); visual interest (r_s = .43); and personal relevance (r_s = .32).

Those who liked the video the most (a rating of 5, 47%) focused on:
♦ Its informative quality (e.g., "very informative about pollution, water, showed problems worldwide;" "enlightening");
♦ Its visual appeal (e.g., "rich visual imagery with a mix of footage, graphics, contemporary video;" "visually very appealing;" "aerial photography of geography");
♦ The personalization of problems ("individual featured stories on how these problems affect certain people;" "emphasis on small groups making a difference").

However, on average, the adults felt the program was a little slow. The 39% of the sample who felt the program was slow (ratings of 1 or 2) complained about:
➢ the narrator (e.g., "needs more variety in voice, perhaps more than one;" "monotone speaking voice, dull");
➢ the narration itself (e.g., "narration a bit boring, mundane or forced;" "narration redundant or sentimental;" "overly dramatic opinions attempted to explain situation;" " 'feel-good' narrow impact reactions and stories);
➢ the photography (e.g., "cinematography very boring-piece had an 80ish feel;")
➢ the music (e.g., "music like old junior high school films").

Table 1 shows that the student sample was relatively neutral in their mean ratings of various aspects of the program. Only half (53%) of the students liked the video, giving it a "5" or "4" rating, with a mean rating of 3.5 overall. Like the adults, higher appeal of the video was also related to higher ratings of content interest (r_s = .66); visual interest (r_s = .52); learning (r_s = .44); and personal relevance (r_s = .32).
Students who liked the video the most (a rating of 5, 13%) focused only on:
♦ Its informative quality (e.g., "very informative;" "learned a lot of new stuff;" "telling me things I never knew").

Students who liked the video the least (a rating of 1, 4%, or 2, 10%) said it was:
➢ Boring ("too boring;" "really boring;" "put half the kids to sleep");

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[1] Other ratings from the Goodman report are not comparable because they looked at "usefulness" of different aspects of the show that this evaluation did not examine.

➢ Slow ("very slow talking;" "very slow moving;" "repetitive, same points made").

Like the adults, students on average rated the program as slow (mean = 2.2). The 66% of the students who felt the program was slow (ratings of 1 or 2) complained about:
➢ Length (e.g., "too long;" "how long it was");
➢ Repetition (e.g., "same story for each city made it boring after awhile;" "repetitive, same points made;" "all cities had same problems, repetitious");
➢ The narrator (e.g., "same voice throughout;" "talked too slow");
➢ Relevance (e.g., "not relevant to me since I will live in suburbs when I'm a doctor;" "could not relate to it").

For two of the eight rating categories, mean ratings of minority students were significantly different from white students. Minorities found the content more interesting (3.5 vs. 2.9) and rated the pace as less slow (2.7 vs. 2.0) when compared with their majority counterparts.

RESULTS: APPEAL

Two-fifths of adults and half of the students liked the video because it was "informative and interesting." Smaller portions of both samples liked the "global, multicultural approach," the "photography;" the "comparison of cities;" and the "importance of the subject matter." Only adults were interested in the "personalization" of the program with individuals' featured stories.

About one-fifth of adults and students critiqued the script and program organization, concerned mainly about repetition and "jumping" between topics. Students were more critical generally: one-third felt the program was "boring" and one-quarter complained it was "too long."

Very small portions (<10%) of both samples mentioned problems with the narrator, pace, visuals, music, credibility of NYC's success, lack of solutions discussion and relevance to middle school age.

What was Liked about Video

In open-ended questions, viewers were asked what they liked and did not like about the video. The table below presents the major categories of what viewers liked most about the video, in order of most to least frequently mentioned categories for the sample as a whole.

Table 2. What viewers liked about the video[2]

What was liked: example comments for A (Adult), S(Student)	% Students (n=116)	% Adults (n=43)
Informative and interesting: A:Very interesting-didn't know about problems. Interesting to learn about environmental challenges facing major cities. Liked learning about major cities, the challenges they face, how they are overcoming problems or not. S: Good information, a lot of interesting things I didn't know. How major cities affect out rural life, I didn't know. Very informative, interesting facts.	52%	42%
Global, multicultural approach: A: Diversity of cultures. Multicultural story. Showed problems worldwide. Variety of cultures. S: Different parts of the world – sometimes Americans forget we're not the only ones. Broadened my perspective on the world.	17%	19%
Photography; Footage: A: Good footage. Imagery of the subject. Cinematography-many angles with quality editing. Visuals kept my interest. S: Beginning where it showed earth at night with all cities lit up. Liked pictures of old city. Really good graphics. Liked aerials.	14%	21%
Similarity of cities' problems; Comparison of cities: A: Comparison format highlighted effects of population growth and pollution on these cities. Pulled together four different geographical locations and showed universal effects of growth. S: Four completely different cities with same problems. Diverse cities were being compared. Diversity good thing so we can compare.	9%	21%
Important subject matter: A: Important issue to address. Problems cited are important even in small communities. S: More socially conscious. Good points-important for people to know.	10%	14%
Personalization: A: Emphasis on small groups making difference. How people speaking up and not letting things continue as they are. Individual featured stories.	-	14%

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[2] Percentages have been rounded off and add up to more than 100% because viewers listed more than one category liked.

What was Not Liked about Video

The following table presents categories of what viewers did not like.

Table 3. What viewers did not like about the video[3]

What was not liked: example comments for A (Adult), S(Student)	% Students (N =116)	% Adults (N = 43)
Boring: S: Flat out boring. Gets really boring. Dull. Too boring.	35%	-
Too long:	23%	9%
Scripting; Narration; Organization: A: Discount tour-mention area then move off to another subject without covering whole story. Felt segments lack a clear organization-narration a bit boring, mundane or forced. Information was unspecific and sporadic, not enough overall structure. No real connections between cities until near end. S: Repetitious (9%). Jumped from one place to another-got lost (3%)	16%	19%
Narrator A: Monotone speaking voice-dull. S: Voice made me want to sleep.	9%	5%
Too slow:	7%	5%
Visuals: A: Boring visually. S: Not many interesting pictures.	2%	5%
Music: A: Music too slow. Like old junior high school films.	1%	5%
Question New York as a success A: Readily apparent ethnocentrism evidenced by producers use of NYC as benchmark of successful management of megaurban centers is disturbing. Surprised to see NYC promoted as success, news to me.	-	9%
Discuss more of solutions A: More solutions. More specific about what is being done.	-	9%
Not relevant to me: S: Could not relate to it. Not relevant to me since I'll live in suburb.	6%	-

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[3] Percentages have been rounded off and may add up to more than 100% because viewers listed more than one category not liked.

Adults felt the program was clear and informative but one-third suggested more discussion about solutions themselves and the associated funding, timeframes and politics.

Adults felt that the program was quite successful at showing environmental problems but less satisfying in identifying solutions. They rated the video as moderately successful in explaining the importance of urban planning, with 14% commenting that the topic was not really discussed.

When asked what they learned from the program, one-third of the adults commented generally on the greatly increasing urban populations and the resulting environmental problems; one-fifth recognized the need for clean water; one-fifth mentioned the importance of planning and working together; 16% learned how Mexico City's geography related to its problems; 12% noted similarities of problems across cities; and 12% were surprised by the exposed raw sewage and lack of treatment.

Students felt that the program content was clear and informative although not very relevant to their lives. Students made few recommendations for clearer or more explanations.

When asked to describe a problem and a solution, almost all students could recall at least one major problem of a city and two-thirds could describe a solution that was presented in the video. About two-thirds of the student sample focused on water problems (pollution; sewage; low levels) and associated solutions (water purification plants; sewage tunnels; reservoirs). Air pollution was noted by 17% of the sample with 6% suggesting solutions of increased public transit or riding bikes. Urban planning was not a solution discussed by students.

Relative to communicating the content, adults rated the program on a 5-point scale (see Table 1) as clear (mean rating = 4.4), informative (4.2), relevant to their lives (4.1) and as having "just enough" information (3.1). Students also felt the program was clear (4.1) and informative (3.8) with "just enough" information (3.5) but with much less relevance to their lives (2.8).

What Could Be Clearer

Respondents were asked to describe something in the video for which they would like a clearer or more detailed explanation. The major areas of interest are described in the table below.

Table 4. Clearer or More Detailed Explanations Requested

What could be clearer: example comments for A (Adult), S(Student)	% Students (N =116)	% Adults (N = 43)
Solutions – More about; More specificity; Discuss funding and politics: A: How were housing improvements funded, what were political problems, what is science and engineering behind the changes. More detailed plan on how city can overcome pollution. More information on solutions for urban growth, more detail. Source of funding for solutions. International political obstacles. S: What did they do to solve problem in Shanghai? How does the sewage system actually work?	6%	33%
Clarification or More explanation about NY: A: Doesn't explain current NY system. S: More about NY's problem. Why was canal built?	8%	7%
Why, How problems weren't addressed earlier: A: Why or how weren't some problems addressed earlier? S: Why did they just start doing things to help now and not when first started?	5%	7%
Information on timeframes A: Clearer time frame outlining growth of the cities. Time frame for solutions. S: How long will it take for them to build water ways in Mexico City?	2%	9%
Mexico sinking: A: More on sinking of Mexico City. S: How a place as big as Mexico City sinks.	3%	2%
Discuss other solutions: A: Want information about alternative energy. Plans for mass transit.	-	12%
Clearer explanation on water problems: S: How water got so diseased. How lost so much water.	6%	-

Students' Understanding of Cities' Problems and Their Solutions

Students were asked to draw from what they learned from the video to describe one major problem of a large city and what might be done to help solve that problem. All but 5 students (96%) were able to recall a city problem but only two-thirds (64%) recalled a solution provided by the video. The remaining third were creative in making up their own solutions (e.g., air pollution- close down the factories; water pollution – ask other countries for water).

Table 5 presents the percentage of the student sample who suggested problems and solutions from the program. Most of what students recalled was drawn from the initial Mexico City segment. Students recalled best the problem of water pollution and the use of water purification plants and building of sewage tunnels. Air pollution was described by 17% of the sample, but only 6% presented solutions of public transit and bike riding.

Although urban planning is one of three major topics in the teacher's guide for this program, students did not present it as a problem solution.

Table 5. Students Recall of Cities' Problems and Solutions

PROBLEMS	%	%	SOLUTIONS FROM VIDEO
Water pollution	38%	21%	Make water purification plants
		11%	Build sewage tunnels
Sewage in water	17%	9%	Build sewage tunnels
		5%	Sewage treatment plants; water purification
Air pollution	17%	3%	Increase public transit
		3%	Ride bikes
Little fresh water available	14%	6%	Make water purification plants
		2%	Make reservoirs
Overpopulation	6%	2%	One child per family restriction
Homeless people	2%	2%	Build apartment buildings
Mexico City sinking	2%	-	

Success of Video Goals

Adults were asked to assess for them personally how successful the video was at accomplishing its goals (as listed in the teacher's guide, p. 10). Table 6 presents the mean

success ratings for each of the three goals.

The adults felt that the program was quite successful at showing environmental problems (mean = 4.5 out of 5). Those who commented mentioned the "good visual examples" and "comparisons" but recommended "graphs" to help reinforce the goal.

The adults felt the program was less successful in identifying solutions for dealing with the problems (mean = 3.6). Comments included recommendations to present more specific solution description, to discuss a broader range of solutions and to discuss the politics involved. This result is supported by the 9% of the adult sample who, when asked what they did not like about the video, wanted more specificity in solutions discussed or more solutions presented (see Table 3, p. 7).

Adults rated the video as moderately successful in explaining the importance of urban planning (mean = 3.8), although 14% commented that this topic was not really discussed in the video and others felt more direct discussion was needed.

Table 6. Success of Video Goals as rated by adults

Video Goals	Not Successful 1	2	3	4	Very Successful 5
A. Show environmental problems created by rapid development of urban areas					4.5
B. Identify some solutions for dealing with problems caused by uncontrolled urban growth			3.6		
C. Explain importance of urban planning in dealing with cities' environmental problems			3.8		

Adult ratings (Table 1) on clarity were highly correlated with success ratings for Goal A (r_s = .54) and Goal B (r_s = .59), whereas ratings on appeal were highly correlated with success ratings for Goal C (r_s = .53). Logically, those who felt the program was clear also felt that it accomplished its basic goals of presenting problems and solutions. Those who liked the program overall felt the program reached its more abstract goal of the importance of urban planning.

What Adults Learned

After viewing the video, adults were asked to describe two major ideas or facts that they learned. The major outcomes noted by more than 10% of the sample are listed below:

➢ 35% commented on the greatly increasing urban population and the resulting environmental problems (e.g., "impact of rapid growth of population to environment").
➢ 19% recognized the increased need for clean water (e.g., "lack of water treatment systems around world").
➢ 19% mentioned the importance of planning and working together (e.g., "problems can be solved if everyone works together").
➢ 16% learned about Mexico City's geographical situation related to its environmental problems (e.g., "how Mexico City's geography is primary cause of environmental problems").
➢ 12% noted the similarities of problems in the different cities.
➢ 12% were surprised by the exposed raw sewage and lack of treatment.

RESULTS: LOCATIONS FOR FUTURE PROGRAMS

> When asked about locations for the next three programs in the series, the two samples preferred locations in the Americas and in Africa.

Both students and adults read paragraphs describing the next three programs in the series, *Journey to Planet Earth*. Respondents were asked to indicate their interest in seeing each of the various locations proposed for each program. The tables below provide the priority and mean rankings of the locations for each show for each sample. For *Seas of Grass*, the adults and students agreed that the Great Plains of North America and Africa's Rift Valley are of most interest. For *Hot Zones*, the samples settled on Chesapeake Bay and Kenya as the preferred locations. Bangladesh received a strong negative vote record, with 43% of adults and 39% of students placing it last in their list. For *On the Brink*, the adults and students agreed on three locations in their top four: Central America, Central Africa and the Middle East. Mexico was first for the adults but ranked sixth for the students; it's possible that the students were saturated on Mexico by having seen *The Urban Explosion*.

Seas of Grass

Adults	Mean Rank	Students	Mean Rank
Great Plains	1.9	Africa's Rift Valley	2.2
Africa's Rift Valley	2.4	Great Plains	2.4
Pampas in Argentina	2.7	Pampas in Argentina	2.6
Steppes of Asia	3.0	Steppes in Asia	2.9

Hot Zones

Adults	Mean Rank	Students	Mean Rank
Chesapeake Bay	1.7	Kenya	2.25
Kenya	2.6	Chesapeake Bay	2.37
Peru	2.7	Peru	2.44
Bangladesh	3.0	Bangladesh	2.92

On the Brink

Adults	Mean Rank	Students	Mean Rank
Mexico	3.0	Central America	3.4
Central America	3.1	Central Africa	3.6
Central Africa	4.0	Persian Gulf	4.0
Middle East	4.3	Middle East	4.1
Persian Gulf	4.4	Haiti	4.2
Haiti	4.5	Mexico	4.4
India sub-continent	4.6	India sub-continent	4.6

After completing the survey, adults discussed the three proposed programs with some of the following prompts from the moderators:
• What are your feelings about the three proposed new shows?
• Do you have any strong positive feelings?
• Any strong negative feelings?
• Are there any particular issues that you feel should be included in these shows?
• Any curiosities that you want answered?
• Are there any particular issues that you feel should be avoided in these shows?
• Any objectionable issues that should not be included?

Seas of Grass

Overall Impressions:

• Most people thought that this episode sounded the least interesting but admitted that it might simply be due to having little prior knowledge about this subject. In addition, some people wondered whether a full episode of interesting material could come from what seemed to be a narrow topic.

• One-fifth of the MN participants thought the topic was very interesting because of their proximity to the Great Plains, but other geographical groups felt it was bland and boring sounding and could not relate to the topic.

Possible Topics to Include/What Want to Learn:

• People wanted this new episode to balance better how human quality of life is suffering with how various factors are affecting *other species* (i.e., some thought *Urban Explosion* was too people-centric). They want the show to consider the needs all living things. For instance, several people mentioned that solutions that might best help the environment and other species might also reduce quality of life for various people. A few others, however, mentioned that they liked that humans weren't being vilified, and that their needs were being taken into consideration.

• How do fertilizers and herbicides from farming hurt the environment and what are the specific ways scientists have developed to treat the contaminated areas?

• What about overgrazing? Highlight our dependence on meat products- the need to find either alternative sources of grazing (like free roaming buffalo) or to eat lower on the food chain.

• What things (e.g., species, other regions) depend on the grasslands? How does changing the grasslands have a large and far-reaching effect on these elements (not just on people)?

- What can be done locally and at a broader level? What are the barriers to doing it? What can I specifically do to combat the problem?

- Include beautiful scenes of grasslands, particularly from the past and how it looks now (as done with Istanbul in *Urban Explosion*).

Areas to Include:

- Most people didn't know enough about the topic to form an opinion about which areas might be most interesting.

- People were split over their level of interest in hearing about the United States, although all thought it would be good to include to some extent as a frame of reference. For instance, some people had heard about these problems in the news or at school and therefore wanted to hear about new areas. The general consensus was to pick areas that had the most dramatic stories.

- A few people thought Africa would be extremely interesting because its wildlife rely on so much food for sustenance (e.g., elephants, giraffes).

- Additional possible areas: Ethiopia (which used to be among the most fertile areas in the world), the rainforest, the wetlands. FL groups were surprised that the Everglades was not considered.

Things to Avoid:

- Some concern that, particularly for this topic, the material could get redundant; try to avoid saying the same things over and over again. Repetition was considered a problem in *Urban Explosion*.

Hot Zones

Overall Impressions:

- Most groups thought this topic sounded the most interesting of the future episodes; several people said that anything on this topic would likely be fascinating and relevant to their lives. They agreed that the outbreak of disease is a world-wide issue and were interested in learning about: how, why and where outbreaks occur; the consequences of outbreaks; and/or knowing treatment strategies.

Possible Topics to Include/What Want to Learn:

• People were confused about the proposed focus on infectious diseases; some thought that other kinds of diseases more directly tied to the environment might be more relevant for a series on the environment (e.g., West Nile disease, tuberculosis, typhus, ebola). People overall didn't understand how diseases like AIDS are environmentally promoted, except by immigration (i.e., AIDS seems more avoidable than other diseases).

• Preference for serious diseases that shorten life, not those like asthma.

• How does the environment (e.g., polluted rivers, changing climates, uncontrolled population growth, immigration) affect the spread of these diseases?

• What are ways to prevent diseases in the short term and long term? (particularly for noninfectious diseases, where the solutions seems less obvious) What are factors limiting the distribution of possible cures (e.g., poverty) and how can this be overcome? What things are feasible and not feasible (e.g., rebuilding an entire city seems impractical)? What can I specifically do to avoid disease (e.g., hygiene)?

• Include how our overuse of antibiotics makes strains mutate and less resistant to treatment.

• What is the prognosis for the future? Is it all bad?

• The Philippines might be interesting to focus on.

• Again, people wanted a balanced discussion of human needs with those of other species (e.g., disease is needed at some level because it keeps human population growth at check).

Things to Avoid:

• Sensationalism

On the Brink

Overall Impressions:

• People were mixed over whether this final topic sounded interesting or not. Some people had a hard time conceptualizing what the focus would be and didn't have enough prior knowledge to give many comments. Some had never considered how climate, water and soil could be linked to politics and found the idea of learning more to be fascinating (e.g., "when they focused on Mexico, my mind kept going to corruption and the effects of political corruption on handling poillution. Therefore, *On the Brink* would take the show to the next step.").

Possible Topics to Include/What Want to Learn:

• People see this episode as a conclusion and want a big picture of overall global problems coupled coupled with examples of how factors in one region of the world affect those in another region; particularly in this episode, inter-region links and dependence should be stressed.

• Show the many factors that contribute to the problem, such as limited resources (e.g., water, oil), differing rates of consumption, economics, trade policies and politics, uncontrolled population growth and birth control (or lack of), war, etc.

• What are scientists doing to combat the problems? What can we specifically do? How can we become less reliant on the resources from other countries?

• Because this is such a complex problem and a broad topic, the structure and organization of the episode must be particularly clear: (a) give a global overview, (b) explicitly compare and contrast places, (c) highlight dependence and links among regions, and (d) clarify what issues are relevant in one place and which ones are not. Some felt there was too much information in the description for one hour.

Things to Avoid:

• Negative impact of show by showing that "all industrialization is bad."
• Vilifying a few agents, rather than saying "here is the problem, let's look for a solution."
• Simplifying the problems as being due to only a few elements.
• Including many opinions rather than facts.
• Leaving a pessimistic view rather than one of hope and optimism ("Don't make it too depressing;" "Make it realistic but be sure to give us some hope.")

This section summarizes the strengths and weaknesses of "The Urban Explosion" video as supported by the reactions of the adult and student viewing groups. The goal of this discussion is to examine reactions to "The Urban Explosion" in order to make recommendations that might be useful for the next three programs in the series, *Journey to Planet Earth*. In discussing the student reactions, however, the reader should be aware of the fact that typically middle school students would not view the full-length hour video as they did in this evaluation but would view pre-chosen segments of a few minutes in length interspersed with activities.

Adults viewers liked the program overall, with 84% giving it high appeal ratings. Results from an earlier report by Goodman Research Group confirm that after a broadcast airing adults found the video similarly appealing. Adults like the video because it was informative and interesting and the photography was visually appealing. They liked the global, multicultural approach and comparison of cities. Finally, a small portion of adults liked the personalization of problems in the featured individuals and emphasis on small groups making a difference.

Adult viewers felt that the program was clear with sufficient information that was personally relevant. They felt that they learned a lot from the program and were able to comment generally on the greatly increasing urban populations and resulting environmental problems.

Eighth graders were not as positive as adults about the program overall, with only 54% rating it highly in terms of appeal. As mentioned above, normally students would view only short sequences of the full-hour video, so this low appeal rating should be discounted as a valid quantitative representation of appeal of the outreach videos. Of more interest are student answers to the open-ended questions. Like the adults, students who liked the video enjoyed its informative quality. Intriguingly, minority students rated the content as more interesting than their majority counterparts, possibly responding to the multicultural aspects of the program.

Students felt that the information provided was sufficient, that the content was mostly clear and that they learned from the program. Almost all students could recall at least one major problem of a city and two-thirds could describe a solution that was presented in the video; thus, the scripting was on a level appropriate to this age.

The above results suggest the following recommendations with respect to future programs in the *Journey to Planet Earth* series:
♦ Replicate the information density and informative quality of "The Urban Explosion," continuing to focus on global multicultural comparisons and the importance of the subject matter to everyday life.
♦ Practice the same rich and various cinematography techniques.
♦ Continue, but do not expand, the personalization approach utilized successfully in "The Urban Explosion."

In terms of weaknesses of "The Urban Explosion," comments from adults and students concentrated on several issues:

1. Pace: Both adults and students felt the program was too slow, focusing on problems with the narrator and the narration. Viewers felt that the narrator's voice was dull, monotone, slow and needed more variety. Viewers also believed that the narrative was repetitive; once the initial problems and solutions were well presented in the Mexican segment, respondents felt the same things were stated over again in the subsequent segments.

2. Organization: A small portion of adults and students felt that the program "jumped" from one place to another without clear transitions or identification of the geographical change.

3. Pessimistic vs. Optimistic quality: Adults felt that the program was quite successful at showing environmental problems but less satisfying in identifying solutions. In fact, few adults described 'solutions' when asked what they learned from the program. Viewers wanted the balance of the program to lean toward optimism and construc-tive responses.

4. Personal relevance: Students, even within urban areas, did not feel that the pro-gram was relevant to their lives. Adults more easily made the connection to their own situations.

The above results suggest the following recommendations with respect to future pro-grams in the *Journey to Planet Earth* series:
◆ Consider a different narrator who will bring more excitement and varied pacing to the narration. Script the narration such that varied pacing rather than a continuous measured tone is required of the narrator's presentation.
◆ Focus on how to address similar issues in different geographical environments without being repetitive.
◆ Provide greater variation in image editing and music to vary perceived pace.
◆ Take care in clarifying transitions between places and providing geographical loca-tion information.
◆ Script so that positive issues and ideas are at least half of the program.
◆ Outreach efforts should identify how the content and video is relevant to students' lives, in particular. Consider the possibility of telling the story of a young person within the videos.

With respect to the evaluation of future program ideas, viewers preferred locations in the Americas and in Africa, as opposed to Asia, India and the Middle East. Echoing is-sues that were brought up in response to "The Urban Explosion," adults wanted the fu-ture programs to be beautiful in terms of cinematography as well as personally rele-vant, non-repetitive and balanced in terms of information and viewpoint.