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Public Acceptability of Highway Safety Countermeasures

Volume IV Pedestrian Safety

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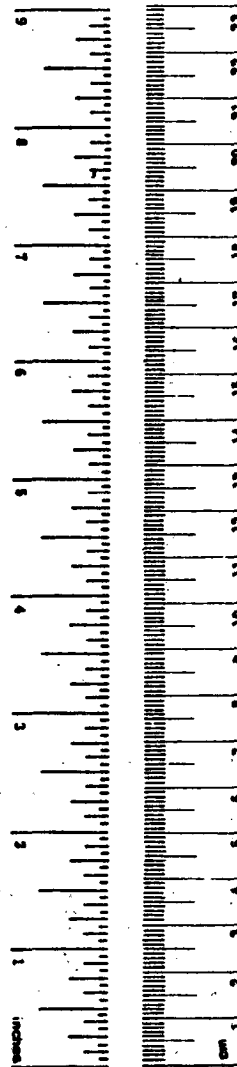
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16. Abstract This volume is part of a larger study providing information about public attitudes towards proposed highway safety countermeasures in three program areas: alcohol and drugs, unsafe driving behaviors, and pedestrian safety. Pedestrian safety countermeasures discussed in this volume include street safety classes for children, vendor regulations, and model parking laws. For the general public survey, acceptability issues are analyzed in terms of demographic characteristics (including age of children under 25), role of schools in safety training, perceived seriousness of the safety problem, and perceived effectiveness of the proposed countermeasure. Special interest perspectives include discussions of parental involvement in children's safety programs, implementation costs, significance of the safety problem, degree of inconvenience imposed on the public, and effectiveness in accident reduction. Perspectives on reactions to countermeasures in other program areas can be found in Volume II for Safe Driving Conformance Research and in Volume III for Alcohol and Drug Research. Volume I of this report describes the research methodology, while Volume V (Summary Report) concisely summarizes the principal results of each of the detailed countermeasure reports and provides guidelines for successful implementation of highway safety countermeasures.					
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METRIC CONVERSION FACTORS

Approximate Conversions to Metric Measures

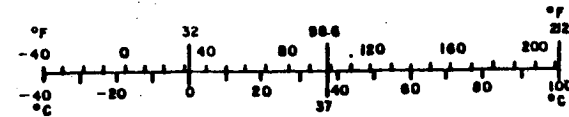
Symbol	When You Know	Multiply by	To Find	Symbol
LENGTH				
in	inches	2.5	centimeters	cm
ft	feet	30	centimeters	cm
yd	yards	0.9	meters	m
mi	miles	1.6	kilometers	km
AREA				
in ²	square inches	6.5	square centimeters	cm ²
ft ²	square feet	0.09	square meters	m ²
yd ²	square yards	0.8	square meters	m ²
mi ²	square miles	2.6	square kilometers	km ²
	acres	0.4	hectares	ha
MASS (weight)				
oz	ounces	28	grams	g
lb	pounds	0.45	kilograms	kg
	short tons (2000 lb)	0.9	tonnes	t
VOLUME				
tsp	teaspoons	5	milliliters	ml
Tbsp	tablespoons	15	milliliters	ml
fl oz	fluid ounces	30	milliliters	ml
c	cup	0.24	liters	l
pt	pints	0.47	liters	l
qt	quarts	0.95	liters	l
gal	gallons	3.8	liters	l
ft ³	cubic feet	0.03	cubic meters	m ³
yd ³	cubic yards	0.76	cubic meters	m ³
TEMPERATURE (exact)				
°F	Fahrenheit temperature	5/9 (after subtracting 32)	Celsius temperature	°C

* 1 in = 2.54 (exactly). For other exact conversions and more detailed tables, see NBS Misc. Publ. 286, Units of Weights and Measures, Price \$2.25, SD Catalog No. C13.10:286.



Approximate Conversions from Metric Measures

Symbol	When You Know	Multiply by	To Find	Symbol
LENGTH				
mm	millimeters	0.04	inches	in
cm	centimeters	0.4	inches	in
m	meters	3.3	feet	ft
m	meters	1.1	yards	yd
km	kilometers	0.6	miles	mi
AREA				
cm ²	square centimeters	0.16	square inches	in ²
m ²	square meters	1.2	square yards	yd ²
km ²	square kilometers	0.4	square miles	mi ²
ha	hectares (10,000 m ²)	2.5	acres	
MASS (weight)				
g	grams	0.035	ounces	oz
kg	kilograms	2.2	pounds	lb
t	tonnes (1000 kg)	1.1	short tons	
VOLUME				
ml	milliliters	0.03	fluid ounces	fl oz
l	liters	2.1	pints	pt
l	liters	1.06	quarts	qt
l	liters	0.26	gallons	gal
m ³	cubic meters	36	cubic feet	ft ³
m ³	cubic meters	1.3	cubic yards	yd ³
TEMPERATURE (exact)				
°C	Celsius temperature	9/5 (then add 32)	Fahrenheit temperature	°F



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The conceptual framework for the study and the overall design of the project were developed by Irving Crespi, who served as Principal Investigator for most of the project's duration. Despite his departure from Mathematica Policy Research prior to project completion, his insights and perspectives are imprinted on the basic orientation of the study and are reflected throughout this report.

The project greatly benefited from the encouragement and assistance provided by Michael Goodman and Maria Vegega, who were the Contract Technical Managers at NHTSA. Valuable input was also received from a number of other individuals at NHTSA, especially Steven Benson and Mark Anderson.

Although many people contributed to the completion of the survey, several individuals deserve special recognition for their roles at various stages of the project. Jan Stiefel and Christine Loy-Kennedy supervised the survey interviewers, using a computer-assisted telephone interviewing system that was fairly new at MPR. Dick Dame performed the programming necessary for the computer-assisted telephone interviewing system; Linda Sperling performed the programming for the numerous cross-tabulations required for the analysis. William Borden was responsible for constructing the many tables needed to present the general-public survey results, and also assisted in the analysis of the special-interest group data. Editing of the final report was performed by Thomas Good, who also coordinated the compilation of the final report product.

Andrea M. Vayda
Project Director

INTRODUCTION TO VOLUME FOUR

This study of public acceptability is designed to provide information to the National Highway Traffic Safety Administration (NHTSA) on public attitudes toward proposed highway-safety countermeasures.

The countermeasure approaches included in this study represent three NHTSA research program areas: (1) Alcohol and Drug Research, (2) Safe Driving Conformance Research, and (3) Pedestrian Research. The research design for this study consisted of three complementary research procedures. First, focus-group discussions were conducted to identify the nature of public beliefs, concerns, and attitudes toward these countermeasures; issues that surfaced during these discussions were incorporated into the questionnaire for the general-public survey. Second, a sample survey of the general public was conducted to produce measurements of acceptability that could be projected to the national adult population. Third, interviews were conducted in ten states with representatives of specific groups and organizations that have a special interest in or a perspective about highway-safety countermeasures.

Since successful implementation of certain countermeasures depends on public acceptability, preliminary indications of public response can guide decisions about whether to proceed with or discontinue a particular strategy. The nature of public reactions can also provide a basis for modifying countermeasure designs and for developing implementation programs specifically targeted to address those aspects of the countermeasure that tend to trigger public support or opposition. Special-interest groups often are in a position to facilitate or thwart implementation of highway-safety countermeasures. They are frequently consulted by state legislatures and may serve as "opinion leaders" for the general public. Data from this study will provide an indication of the type of preliminary data, persuasion, or other attention particular groups may warrant in the event a countermeasure program would be implemented.

The report on the Public Acceptability of Highway Safety Countermeasures consists of five volumes. The organization of the report is guided by an interest in bringing together, by countermeasure, the findings from the focus-group discussions, the general-public survey, and the special-interest case studies.

In addition to this volume, which presents results on the pedestrian safety countermeasures, Volumes II and III each present findings on countermeasures in a specific NHTSA program area. Volume I provides a detailed description of the methodologies employed for each of the three studies and also contains copies of the data collection instruments. Volume V is a summary report which presents the highlights of the results for specific countermeasures and includes an overview of factors that influenced the acceptability of highway-safety countermeasures to the general public and to special-interest groups.

Specifically, the five volumes of the report are organized as follows:

VOLUME ONE: BACKGROUND OF STUDY AND METHODOLOGY

CHAPTER I Introduction
CHAPTER II Methodology
CHAPTER III Organization of the Report:
Volumes I-V

VOLUME TWO: SAFE DRIVING CONFORMANCE RESEARCH

CHAPTER I The 55 MPH Speed Limit
CHAPTER II Speed Detection and Deterrence
CHAPTER III Dangerous and Negligent Driving
Deterrence

VOLUME THREE: ALCOHOL AND DRUG RESEARCH

CHAPTER I Breath Testers
CHAPTER II Drunk Driving Deterrence
CHAPTER III Roadside Surveys
CHAPTER IV Impairment Resistance

VOLUME FOUR: PEDESTRIAN SAFETY

CHAPTER I Focus Group Discussions
CHAPTER II General Public Survey
CHAPTER III Special-Interest Case Studies

VOLUME FIVE: SUMMARY REPORT

ADDENDUM

Final Report to "Public Acceptability of Highway Safety Countermeasures"

The purpose of this project was to obtain information about public attitudes on highway safety countermeasures in three program areas: alcohol and drugs, unsafe driving actions, and pedestrian safety. To this end, three methodologies were employed: Focus Group Discussions, Special Interest Case Studies, and a General Public Survey. This addendum discusses some critical issues related to interpretation of the project's results.

Focus Group Discussions were employed in the design and pilot stages of this project for the purpose of identifying relevant public acceptance issues worthy of investigation. Members of special

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PEDESTRIAN SAFETY

Three of the countermeasures included in this study are explicitly designed to promote pedestrian safety. Special training for children would use simulated accident situations to instruct children in street safety. Model vendor laws would require ice-cream trucks to be equipped with signal lights; when the lights are turned on, cars would have to come to a stop before proceeding. Two model parking laws were also included--one calling for angle as opposed to parallel parking where possible, the other prohibiting parking near street corners.

While most of the countermeasures in this study are designed to enforce existing regulations more effectively, the pedestrian countermeasures would alter situations that are conducive to accidents, by instituting new regulations or by specially training high-risk pedestrians. Each of the countermeasures focuses on a situation in which pedestrian accidents are likely to occur. The accident-related problem common to all three of these situations is that pedestrians are poorly visible: in each case, the pedestrian is difficult to see, or is not visible, until it is too late to prevent the accident. The special-training program is designed to increase children's awareness of safety hazards, and to inculcate habits that would deter them from running out into traffic or from playing near traffic areas where drivers may not be able to see them. Similarly, having cars come to a stop before passing an ice-cream vendor would allow children to approach the truck without crossing through traffic, and would increase the drivers' awareness of children in the area. With angle parking, pedestrians passing between parked cars are more aware of and more visible to on-coming traffic. Visibility is also improved when cars are not parked near intersections.

The first chapter below presents the reactions of the focus-group discussants. The second chapter presents the results of the general-public survey, and the third chapter presents special-interest responses.

I. FOCUS GROUP DISCUSSIONS

Six group discussions were conducted on the four countermeasures designed to increase pedestrian safety. Two groups consisted of discussants under age 30; two groups consisted of discussants over age 30; and two groups consisted of special-interest representatives.

The following descriptions were presented to the discussants:

Schools would give special classes for all children up to the age of eight. Children would be taught to not dart out into the street without first checking for cars. The training would be conducted using both films and practice in class and on the streets.

A Vendor Regulation would require vendor trucks, such as ice-cream trucks, to have a warning signal. When the truck is stopped, cars must come to a full stop and then proceed with caution.

Parking Regulations would be put into effect that (1) would forbid parking near street corners and crosswalks, and (2) would require that parking be parallel to sidewalks, as opposed to parking at an angle to sidewalks. These regulations are intended to make pedestrians and on-coming cars more easily visible.

A Vehicle Overtaking Regulation would require a driver to stop the car if another car has stopped at a crosswalk. The driver proceeds only after checking that the crosswalk is clear.

Focus-group reactions to the special classes for children are presented in the first section below. Because of the similarity of reactions to the three vehicle regulations, they are treated as a single set and are presented in the second section.

A. STREET SAFETY CLASSES^{1/}

Discussion about the acceptability of conducting street-safety classes in schools was characterized by two conflicting attitudes. One was that anything that could be done to inculcate safety attitudes and habits of young children is, by definition, a good device. The other was that however desirable safety training may be, schools are not necessarily the proper agency.

^{1/} The scenarios on street-safety classes stressed their institutional setting, and not their content or teaching techniques. The discussions reflected this.

Approval of having schools conduct street-safety classes for children up to eight years of age was based primarily on a general concern for the safety of children, rather than on a positive attitude toward the specific concept. As a middle-age Cincinnati discussant stated, "Anything would help, even though they may not listen." For some discussants, approval of special-training classes was based on their acceptance of existing programs: "Safety is now taught kindergarten and up." "Schools already do this--it is very necessary." Others assumed that safety training was already a component of elementary-school curricula: "I am surprised that schools don't do that already." The only reservation they had about special-training classes was that eight years of age would be the cut-off point: "Why stop at 8? Why not 12?" "Why stop at age 8? It should be ongoing."

The issue of parental responsibility was the subject of considerable discussion. Some discussants qualified their approval of school programs by saying there should be parental participation. However, the type of parental participation was not specified: "Parents should be involved also." A young Seattle discussant felt that one reason for wanting parental participation was that training would be ineffective without it: "You can't tell kids not to run in the streets. It's worthless without parental reinforcement."

Some discussants opposed school programs on the grounds that the crucial role in safety training should be played by parents. Illustrative of this position was the comment of a middle-age Seattle discussant: "I would think this would be partially taught at home, unless the parents are absolute idiots. This is useless to learn in school if they haven't learned it by school age." Although some discussants pointed out that "all parents don't do it though," others insisted that "this is not the responsibility of public schools. This is for parents." A related attitude was that in order for safety training to be effective, it had to be home-centered: "Would kids be able to carry it home with them, since most of the accidents would happen in their own neighborhoods?" Thus, some form of parental involvement would likely enhance the acceptability of school-training programs in two ways--by recognizing the responsibility of parents, and by increasing the effectiveness of the training.

In addition to the belief that schools have limited, if any, responsibility for safety training, some discussants expressed concern that such programs would inhibit schools from totally fulfilling their primary obligation. This view was expressed by a young Seattle discussant: "Schools are burdened enough and are in terrible enough shape without adding this." A similar opinion

was voiced by a middle-age discussant: "It's a big waste of time and money. Children should be in school to learn the basics and not be wasting time with things that should be taught in the home. This is like teaching them 'Don't lie. Don't steal.' It's the same principle basically." A concurring opinion was the following: "The amount of basic education kids get in school is about a third of what they're taking."

In answering opponents of special-training classes in schools, some discussants supported the program by arguing that it was necessary to compensate for the inadequacy of other approaches. For example, "What if parents don't do it?" "What about underprivileged children?" The advantage of school programs is that they have "a captive audience."

Implicit in some of the above comments was the belief that safety training is simple and easily administered. One middle-age Seattle discussant explicitly made that point: "It would not require special classes---just 10 minutes or one session." Another discussant agreed: "It's just a matter of looking both ways before crossing the street. It's pretty simple." Discussants who accepted this opinion saw no reason for a developed training program: "It should not be done in a formal sense." These discussants felt that they would accept a school safety-training program only when they could be convinced that inculcating safety habits required a special effort that schools are better able to provide than parents.

A final objection to school-training classes focused on the relationship between local schools and the federal government. Some discussants felt that the classes would be another intrusion into local autonomy. A young Seattle discussant voiced the following opinion: "The highway department does not have the right to tell schools here things." These objections were not directed at the concept itself, but at the role of federal government: "I think it's a good idea, but I would rather not see it as a federal program because I would not like to see the federal government saying to every school district, 'You will have this program and you will submit statistics on how effective it is and you will submit budgets on how much it costs.'" A concurring view was the following: "The advantage of nonfederal is the ability to be flexible about where it will be done and what is included."

There was some discussion about alternative approaches. One suggestion was to use television (specifically, Sesame Street) as a safety-training medium. Another was to have a "circuit team" going from school to school or to other groups such as day-care centers. What all these suggestions appeared to have in

common was a desire for creative approaches to safety training, as well as for directing efforts toward preschool children.

B. VEHICLE REGULATIONS

1. Common Themes

A number of similar themes characterized much of the discussion on vendor, parking, and vehicle-overtaking regulations. Discussants were familiar with the concept behind all three regulations, and, in fact, described them as no more than an "elaboration of existing pedestrian laws" and "a duplication of things on the books." With the exception of some concern about the intrusion of the federal government into local communities, discussion was relatively low-key and focused largely on the practical issues of need, enforcement, and effectiveness. Opposition to these three types of countermeasures was based on skepticism about whether the problems they deal with are significant, whether they can be enforced, and whether they would be effective. Whatever favorable attitudes were expressed could be better described as acquiescent approval, rather than active endorsement, of the purpose behind the countermeasures.

Doubts about whether pedestrian safety was a sufficiently serious problem to warrant the implementation of these countermeasures were voiced largely as questions:

"Is this a big problem?" [Vendor regulations]

"Is it worth it?" [Parking regulations]

"Would the number of accidents be enough?" [Vehicle overtaking]

These doubts were not challenged by the other discussants. Similarly, some discussants felt that the proposed regulations did not deal with the real, or more important, problem. For example, a young Seattle discussant commented, "More people get hit walking along the road or crossing a crosswalk than . . . get hit because of vendor trucks." The same attitude was expressed by another discussant: "Turns are more important when someone wants to cross, especially in congested areas."

Skepticism about enforcement was expressed quite strongly, and generally served as the focus for discussion. One young Seattle discussant, talking about vehicle-overtaking regulations, said that they "become another something that's on the books that can't be enforced." A concurring view was expressed: "Coming to a full stop and proceeding with caution can't be enforced." Similarly, a

middle-age Cincinnati discussant made the following observation about vendor regulations: "Who would be there to catch people?" In addition, a young Denver discussant said that the parking regulations "can't be enforced."

Based on past experience, discussants doubted the enforceability of these pedestrian laws:

"There currently are yield-to-pedestrian laws, and they are not enforced."

"Pedestrian laws are not enforced."

"Police do not enforce regulations like this."

"School-bus lights are violated all the time and there are no police around."

"Already you can't park near intersections, but delivery trucks do this all the time."

Implicit in these comments was the belief that violating pedestrian-safety laws is to be expected, and that it can be done with impunity.

Further justification in opposing model pedestrian regulations was their alleged ineffectiveness in reducing deaths and accidents: "I don't think any of them will save lives." "[They are] not particularly effective in reducing accidents--no effect." A young Denver discussant claimed that "enforcing these laws would be much more of a hassle than it would be worth. I don't really think that they would make that much difference in the number of pedestrian deaths."

The acceptability of pedestrian-safety regulations by discussants sometimes depended on whether they were more sympathetic to drivers' rights than to pedestrians' rights. Some discussants criticized countermeasures that protect the pedestrian at the inconvenience of the driver, and even expressed open hostility toward pedestrians as such:

"Pedestrians are getting too many rights. They specifically jog in the streets."

"Police are too interested in speeders and should be ticketing people for pedestrian violations."

Similarly, a middle-age Cincinnati discussant offered one suggestion for pedestrian safety: "People can be taught to cross streets defensively." In opposition to these antipedestrian views was the following challenge: "The pedestrian is more important than a car being stopped."

Defenders of pedestrians' rights did not necessarily have confidence in laws designed for their protection. When discussing the vehicle-overtaking law, a Seattle discussant observed, "In practice I will not assume that a car will stop." Perhaps for this reason, some placed more faith in physical redesign--for example, adding "sidewalks and bikeways." One discussant offered another suggestion: "We need a way for a person to do something to say 'Here I am, I want to cross'--like a flashing light that turns red when someone wants to cross." This discussant had just observed that "a crosswalk or blinking light is not effective--cars go through." Still another suggestion was the following: "Instead of a sign saying NO PARKING FOR 30 FEET, they should have a sign there saying NO PARKING HERE."

Other specific criticisms focused on the undesirable consequences of countermeasures: "Where I live, you are required to back in at an angle. If you couldn't do that, it would be an even more disastrous nightmare--havoc." Others criticized vendor regulations on the grounds that they are "a congestion causer," and that "the signals would interrupt the traffic cycle." Attitudes such as these, while they do not necessarily lead to public rejection, can cause apathy and, eventually, noncompliance.

Some discussants questioned the wisdom of relying on laws to increase pedestrian safety, asserting that driving habits and attitudes were more important. This position was largely congruent with the belief that the regulations are unenforceable. One young Denver discussant commented, "We have to change people's attitudes, as we do with children." A young Seattle discussant expressed a similar viewpoint: "We need television campaigns about awareness." Another Seattle discussant questioned the value of television campaigns, but did feel that attitudes and habits were crucial: "[The television campaign] will not do any good because you establish driving habits when you are 16 years old, and it has everything to do with the kind of person you are. It is a reflection of your personality." These comments typified the basic dilemma of discussants--that is, they had little faith in the enforceability of pedestrian safety laws, but also believed that there were many unsafe drivers on the road.

A different type of concern about model pedestrian regulations was made with respect to the role of the federal government: "The reason these don't work is that bureaucrats write them." "None of these should be federal regulations. They ought to be local regulations encouraged by DOT." One young Seattle discussant commented, "I don't think federal money should be spent to teach people common sense." Others saw the issue in terms of who would be

responsible--"the city or the federal government?"--and opted for the former. A Denver discussant took the position that the federal government "has no business dealing with local regulations." The discussant also felt that "state and local governments are going to be required to implement laws to get the state [other] money. They are not going to do anything because nobody believes in them. It's going to be a farce." Thus, apart from whatever merit the public saw in proposed model regulations, the fact that the model would be prepared by DOT and not through local initiative could become a crucial issue and a source of resistance.

2. Specific Pedestrian Safety Regulations

In addition to the common attitudes toward all three types of pedestrian-safety regulations, there were a few specific responses to each:

a. Vendor Regulations

A sharp distinction was made between ice-cream trucks, whose customers primarily are children, and other food vendors, such as lunch trucks, that are patronized by adults:

"Those geared toward children should have lights, but lunch trucks for adults don't need them."

"Ice-cream trucks should have lights."

One reason for making this distinction is that it would minimize inconvenience to drivers, and any consequent frustration: "Lunch trucks cause traffic jams, which is more frustrating and causes more accidents than trucks without lights." A middle-age Cincinnati discussant reacted to vendor regulations by saying, "A warning light is very helpful, but asking every car to stop is ridiculous." A concurring view was that "a full stop is unreasonable." A young Denver discussant complained that "the signals would hold up traffic," while a middle-age Seattle discussant commented that "drivers could get impatient with this vehicle."

Apparently, the specific concern about children's safety may make the vendor regulation acceptable when applied only to ice-cream trucks. However, even in that case, discussants sought an alternative to stipulating that passing vehicles stop. As one middle-age Cincinnati discussant observed, "Vendors like ice-cream trucks are often there for 15 to 20 minutes." The alternative suggested in a number of groups was to forbid vendor trucks, including ice-cream

vendors, from stopping or parking on the roadside, and to provide them with selling areas off the road:

"The regulation should require that the driver pull off the road. They should not be allowed to stop any place they want."

"They should either pull off or be allowed to stop only in certain places."

"It's better to have a law for the drivers, allowing them to stop only in certain places."

"A better idea is to have a better-designated parking area for trucks."

These comments reflect in part the irritation of discussants about what they perceived to be inconsiderate, willful stopping habits of vendor trucks. The comments may also have stemmed from the negative attitude toward pedestrians mentioned above, which was based on the opinion that inconveniencing the driver should not be secondary to pedestrian safety. From this perspective, countermeasures that would not inhibit driver convenience would be accepted.

b. Parking Regulations

One strong opinion was that parking regulations should be tailored to the needs of the local sites, and that standardized regulations should not be promulgated: "Requiring that parking be parallel is a generalization--a sweeping one--that really does not accomplish too much. It depends on where you are in the city, what kind of traffic goes by, [and] whether it is a residential area." Others made a distinction between urban and rural needs, commenting that pedestrians are on their own and should know how to get along in their area. (This latter view is another illustration of the driver-pedestrian hostility.)

Closely related to the issue of taking local conditions into account is the question, What makes for visibility? In some groups, there were conflicting viewpoints on this issue. One Seattle discussant questioned the practicality of angle parking, claiming that "streets that can accommodate angle parking are wide enough as it is to permit enough visibility." A different opinion was the following: "Roads are not wide enough to accommodate angle parking." Another Seattle discussant claimed that "how close cars are to the crosswalks is more important" than how they are parked. According to this viewpoint, parallel parking would be no problem if such other factors as crosswalk visibility were taken into account. The following exchange took place in a Cincinnati group:

"In parallel parking, you worry more about the fender than about pedestrians."

"In angle parking, you can't see what's coming."

"The question is academic--it depends on whether you have the space or not."

"You can see more if you park parallel."

"If you have angle parking, you can have crossing only at certain places."

As illustrated by this exchange, discussions about the determinants of visibility were characterized by considerable disagreement about the pertinent facts and, thus, about the acceptability of parallel parking. In behalf of angle parking, one discussant pointed out that there were benefits for the driver: "Actually it is safer for the driver to have angle parking because the driver doesn't have to walk out into the street to get in and out of the car."

There was one determinant of visibility about which there was no disagreement--namely, parked trucks. A middle-age Seattle discussant singled them out, saying, "Large trucks are a terrible visibility problem." The same view was held by a young Seattle discussant: "What is parked is more important than how. The size of the vehicle is the biggest problem." Parallel parking was not seen to have any advantage over angle parking with respect to the obstruction of visibility by large vans or trucks.

c. Vehicle Overtaking Regulation^{1/}

While the enforceability of this countermeasure was questioned, the basic concept was not: "This is common sense, if it is not actually a law." "[The regulation is] reasonable--often you think the car stopped because they have car trouble." Some wondered whether the regulation might be redundant: "Is it not a law that at a crosswalk a car must yield to a pedestrian?" Other discussants, however, noted its distinction from existing law: "Currently you have to stop only if there is a pedestrian."

An observation made specifically about parking regulations exemplifies an attitude underlying the discussion about all three types of regulations: "The decisive thing is not the level of visibility, but the basic perception of

^{1/} This countermeasure was covered only in the focus-group discussions.

drivers coming along the street, as to what constitutes danger and their response to that--and that comes back to driver education." This attitude, combined with skepticism about the enforceability of these pedestrian-safety regulations, led to an apathetic reaction to all of them. The fundamental issue was not the acceptability of the concept of a regulation, but, rather, how to train people to be safe drivers, thus precluding the need for the regulations. As it is, they were perceived as ineffective ways to correct poor driving habits.

II. GENERAL PUBLIC SURVEY

Public reactions to special training, model vendor laws, and model parking laws are described in separate sections below.

A. STREET SAFETY CLASSES FOR CHILDREN

The idea of providing children with special training was presented to survey respondents as follows:

- Now I would like to get your reaction to some ideas for increasing the safety of children:

One idea is to give children up to the age of eight special training on street safety. Training would be given in streets that have been closed off, except for cars driven by specially trained drivers. Training would cover situations in which children make the most serious mistakes, such as crossing in the middle of the block or playing near streets. They would then be shown what they should do in such situations to avoid an accident.

Based on the reactions of focus-group discussants, increasing safety for children was a highly popular objective, and programs geared toward child safety were considered intrinsically worthwhile. Because the specific countermeasure intervenes directly with children and because it may be implemented through the school system, its acceptance touched on two value systems. First, some discussants felt that teaching children about street safety was exclusively a parental responsibility. Teaching safety was considered analogous to instilling other basic principles and ethics that fall under parental responsibility. Second, the countermeasure triggered concern that schools were already handling too many nonacademic functions. Because some discussants felt that school systems already lacked emphasis on basic education, there was some resistance to spreading the school curriculum even thinner.

For purposes of gauging the reaction of the general public to the special-training countermeasure, the issues raised during the focus groups were incorporated into the survey in terms of (1) attitudes toward having schools involved in street-safety training at all, and, if schools should be used, (2) the preferred scheduling of the training and (3) whether the training should be mandatory for all children or at parental discretion. The following questions were asked:

- Some people say that giving this kind of safety training to children eight years or younger is the parents' responsibility only. Others say that schools should also give this kind of training. What is your opinion?

IF "SCHOOLS SHOULD ALSO":

- Do you think the training should take place during, or after, regular school hours?
- Do you think it should be required of all children, or should it be up to parents to decide whether their children will attend?

Table II.1 shows the acceptability of street-safety training among drivers and nondrivers and their opinions about the three implementation criteria.

Special safety training for children received resounding support from survey respondents: 88.7 percent of the drivers and 89.7 percent of the nondrivers were in favor. The opinion was equally strong in behalf of school involvement in this type of training. In addition to parents providing street-safety training, 89.9 percent of the drivers and 85.3 percent of the nondrivers indicated that schools should also play a role in street-safety training. Given that there would be some parental activity in this area anyway, a very small proportion of the respondents, however, defined this as exclusively a parental responsibility.

Further, the dominant opinion was that classes should be incorporated into the regular school schedule. Whereas only 18.8 percent of the drivers opted for having safety training offered after school hours, 77.6 percent indicated that it should take place during school hours.

Drivers' interest in having children receive this training was underscored by the large proportion of drivers (69.3 percent) who thought that the training should be required of all children. Although it is clear that most drivers did opt for the mandatory participation of children in this training, in contrast to the other dimensions measured in conjunction with street-safety training the voluntary-mandatory issue was the only one that elicited any notable disagreement.

Table II.2 shows the acceptability of street-safety training by various demographic subgroups; acceptability among drivers with children, broken down by

TABLE II.1

ACCEPTABILITY OF STREET-SAFETY TRAINING AND OPINIONS
ABOUT THREE OPERATIONAL ISSUES, FOR DRIVERS AND NONDRIVERS

Acceptability of Street-Safety Training (Q. 1-5)	Drivers	Nondrivers
Favorable	88.7	89.7
Unfavorable	10.0	8.8
Undecided	1.3	1.5
Total	100.0 (452)	100.0 (68)
Role of Schools in Special Training (Q. 1-6)		
Parents' Responsibility Only	8.1	11.8
Schools' Responsibility Also	89.9	85.3
Undecided	2.0	2.9
Total	100.0 (455)	100.0 (68)
When Should Training Take Place? (Q. 1-6b)		
During School Hours	77.6	67.3
After School Hours	18.8	29.3
Undecided	3.6	3.4
Total	100.0 (410)	100.0 (58)
Mandatory or Voluntary Participation (Q. 1-6c)		
Required of All Children	69.3	58.6
Up to Parents	29.0	39.7
Undecided	1.7	1.7
Total	100.0 (410)	100.0 (58)

TABLE II.2

ACCEPTABILITY OF STREET-SAFETY TRAINING,
BY DEMOGRAPHIC CHARACTERISTICS

Acceptability of Street-Safety Training (Q. 1-5)	Region				Sex		Age		
	NE	S	MW	W	M	F	<30	31-44	45+
Favorable	86.1	89.8	88.4	90.0	84.8	91.3	91.8	90.0	86.0
Unfavorable	12.0	9.1	9.7	10.0	12.8	7.9	7.0	9.4	12.4
Undecided	1.9	1.1	1.9	0.0	2.4	0.8	1.3	0.6	1.6
Total	100.0 (108)	100.0 (176)	100.0 (155)	100.0 (80)	100.0 (204)	100.0 (252)	100.0 (158)	100.0 (160)	100.0 (193)

Acceptability of Street-Safety Training (Q. 1-5)	Education			Income	
	< High School	High School Grad	Any College	<\$12,000	\$12,000+
Favorable	93.6	92.2	83.7	95.5	87.6
Unfavorable	5.4	6.0	15.8	4.5	11.4
Undecided	1.0	0.8	0.5	0.0	1.0
Total	100.0 (93)	100.0 (167)	100.0 (190)	100.0 (112)	100.0 (298)

$p < .05^a/$

$p = .05$

^{a/} Because of small cell sizes (resulting in expected frequencies of less than 5), chi-square may not be valid.

whether they have children in certain age categories, is presented in Table II.3. To the extent that the drivers surveyed were opposed to the training, they were more likely to have high educational or income levels. While 10 percent of the total driver sample opposed this training program, the proportion increased to 15.8 percent among drivers with some college education. The distribution of drivers' reactions to street-safety training was fairly consistent across geographic regions and drivers' sex and age.

Whether or not the drivers surveyed had any children under the age of 25 did not alter the pattern of acceptance for safety training. However, drivers who are parents of a child(ren) under the age of 15 were especially likely to favor the training. Opposition to this countermeasure, on the other hand, was somewhat higher among drivers with children in the 16- to 25-year-old age range (15.4 percent of these drivers were opposed). Lower levels of support among this group of drivers may have stemmed from the fact that safety concerns about children were no longer an immediate and acute issue.

TABLE II.3

ACCEPTABILITY OF STREET-SAFETY TRAINING,
BY AGE OF CHILDREN

Acceptability of Training (Q. 1-5)	Age of Children				
	Age 4 or younger	5-8	9-15	16-25	No Children <25
Favorable	91.4	93.8	91.3	82.7	88.8
Unfavorable	7.4	6.2	7.8	15.4	10.1
Undecided	1.2	0.0	0.9	1.8	1.1
Total	100.0 (81)	100.0 (80)	100.0 (115)	100.0 (110)	100.0 (188)

Table II.4 shows drivers' opinions about the three implementation criteria, by demographic characteristics; Table II.5 shows these opinions by whether the drivers surveyed had children in certain age categories. Drivers' opinions about two of the implementation issues (the role of the schools in providing training and the scheduling of the training) were fairly constant for all of the demographic subgroups.

TABLE 11.4

DRIVERS' CONCERNS ABOUT THREE OPERATIONAL ISSUES ASSOCIATED WITH STREET-SAFETY TRAINING, BY DEMOGRAPHIC CHARACTERISTICS

Role of Schools in Special Training (Q. 1-6a)	Region				Sex		Age			Education			Income	
	NE	S	MW	W	M	F	<30	31-44	45+	<High School	High School Grad	Any College	<\$12,000	\$12,000+
Parents' responsi- bility only	13.8	4.5	10.2	7.5	10.8	6.0	5.7	10.6	9.2	4.3	7.2	10.5	3.6	9.4
Schools' responsi- bility also	86.2	92.1	86.5	91.3	85.8	93.2	91.1	86.9	89.3	92.5	91.0	87.9	95.5	89.3
Undecided	0.0	3.4	3.2	1.2	3.4	0.8	3.2	2.5	1.5	3.2	1.8	1.6	0.9	1.3
Total	100.0 (109)	100.0 (176)	100.0 (156)	100.0 (80)	100.0 (204)	100.0 (252)	100.0 (158)	100.0 (160)	100.0 (195)	100.0 (93)	100.0 (167)	100.0 (190)	100.0 (112)	100.0 (298)
When Training Should Take Place (Q. 1-6b)														
During regular hours	82.7	74.1	80.4	72.1	76.0	78.7	81.9	77.9	73.0	72.1	77.6	79.6	72.0	80.1
After regular hours	16.1	21.8	13.4	26.2	21.1	17.0	18.1	19.1	19.9	23.3	19.1	16.8	25.2	16.9
Undecided	1.1	4.1	6.2	1.7	2.9	4.3	0.0	3.0	7.1	4.6	3.3	3.6	2.8	3.0
Total	100.0 (87)	100.0 (147)	100.0 (112)	100.0 (61)	100.0 (175)	100.0 (235)	100.0 (127)	100.0 (131)	100.0 (141)	100.0 (86)	100.0 (152)	100.0 (167)	100.0 (107)	100.0 (266)
Mandatory or Volun- tary Participation (Q. 1-6c)														
Required of all children	71.3	67.4	71.4	67.2	68.0	70.2	66.9	71.8	70.2	58.1	65.1	79.0	70.1	70.7
Up to parents	27.6	29.9	26.8	32.8	31.4	27.2	32.3	28.2	25.5	37.2	34.2	19.8	29.0	27.8
Undecided	1.1	2.7	1.8	0.0	0.6	2.6	0.8	0.0	4.3	4.7	0.7	1.2	0.9	1.5
Total	100.0 (87)	100.0 (147)	100.0 (112)	100.0 (61)	100.0 (175)	100.0 (235)	100.0 (127)	100.0 (131)	100.0 (141)	100.0 (86)	100.0 (152)	100.0 (167)	100.0 (107)	100.0 (266)

p < .01

TABLE II.5

DRIVERS' OPINIONS ABOUT THREE OPERATIONAL ISSUES
ASSOCIATED WITH ANTI-DART-OUT TRAINING,
BY AGE OF CHILDREN

Role of Schools in Special Training (Q. 1-6a)	Age of Children				No Children <25
	Age 4 or younger	5-8	9-15	16-25	
Parents' responsi- bility only	6.2	6.3	9.6	14.5	4.3
Schools' responsi- bility also	93.8	91.2	88.7	84.6	92.5
Undecided	0.0	2.5	1.7	0.9	3.2
Total	100.0 (81)	100.0 (79)	100.0 (115)	100.0 (110)	100.0 (188)
When Training Should Take Place (Q. 1-6b)					
During school hours	71.1	77.8	77.4	78.5	79.9
After school hours	27.6	19.4	20.6	18.3	14.9
Undecided	1.3	2.8	2.0	3.2	5.2
Total	100.0 (76)	100.0 (72)	100.0 (102)	100.0 (93)	100.0 (174)
Mandatory or Voluntary Participation (Q. 1-6c)					
Required by all children	61.8	68.1	70.6	71.0	69.0
Up to parents	38.2	31.9	28.4	28.0	27.6
Undecided	0.0	0.0	1.0	1.1	3.4
Total	100.0 (76)	100.0 (72)	100.0 (102)	100.0 (93)	100.0 (174)

Unexpected differences occurred by drivers' educational levels with respect to the voluntary-mandatory question: drivers with a high school education or less were much more likely to want the parents to decide whether children should participate in this special training. Specifically, 19.8 percent of the drivers with at least some college education indicated that parents should decide, while 34.2 percent of the drivers with a high school education and 37.2 percent with less than a high school education held this position. These findings are contrary to the pattern found for other countermeasures, in which drivers with higher educational levels tended to be less supportive of strategies that restricted personal choice.

Driver's opinions about the mandatory-voluntary question were fairly consistent across regions and sex, age, and income groups.

When drivers' opinions about the operation issues are examined in relation to whether they have children (and the age of their children), two variations emerge. First, parents of a child(ren) age 16 to 25 were most likely (although the differences are not large) to regard the safety training as a parental responsibility only. Drivers who did not have children under age 25 were as likely as drivers with children in the targeted age category (under age 8) to favor school involvement. Second, although the differences are also slight, drivers' preferences for having the training after school hours and having children participate if parents so choose was greater if they had very young children (age 4 or younger).

B. MODEL VENDOR REGULATIONS

The second pedestrian countermeasure is also aimed at reducing accidents that involve children, and was presented to survey respondents as follows:

Another suggestion (for increasing the safety of children) has to do with trucks that have stopped at the side of a road or street to sell ice cream. It has been proposed that a law be passed that these ice cream trucks turn on a special signal light that would require cars coming from either direction to stop before passing. (Parentheses not included in question.)

In contrast to special street-safety training (which directly affects only children), the model vendor law impinges on drivers as well. While the attitude still prevailed that the safety of children overrides other considerations, focus-group discussants did note that requiring cars to come to a full stop before proceeding may be an overreaction. The extent to which

ice-cream trucks are really a safety hazard was also questioned. For some discussants, the stop represented an unnecessary inconvenience to the driver, since a reasonable alternative would be to restrict the areas in which ice-cream trucks could stop.

Of the drivers surveyed, 71.6 percent favored the model vendor law (see Table II.6). Not surprisingly, nondrivers were even more likely to favor this law (favored by 83.7 percent). For drivers in particular, the proportion which favored the vendor law was much smaller than the proportion which favored special training.

TABLE II.6
ACCEPTABILITY OF MODEL VENDOR LAW,
FOR DRIVERS AND NONDRIVERS

Acceptability of Model Vendor Law (Q. 1-7a)	Drivers	Nondrivers
Favorable	71.6	83.7
Unfavorable	27.3	11.9
Undecided	1.1	4.4
Total	100.0 (455)	100.0 (68)

Table II.7 presents drivers' attitudes toward the model vendor regulation, by demographic characteristics. Differences in the acceptance of the model law were quite pronounced between male and female drivers. Men were less likely than women to support the model law: 34.5 percent of the male drivers were opposed, as compared to 21.3 percent of the women drivers. Differences in the acceptance of the model vendor law also occurred between drivers of different educational levels. The proportion of drivers who rejected this law increased with educational level: the proportions shifted from 20.4 percent among drivers with less than a high school education to 32.3 percent for drivers with some college.

Persons for whom the ice-cream vendors may be especially relevant were more likely to support the model law: drivers with children either 4 years old or younger or between the ages of 5 and 8 were more likely than drivers with

TABLE II.7

ACCEPTABILITY OF ICE-CREAM VENDOR LAW,
BY DEMOGRAPHIC CHARACTERISTICS

Acceptability of Model Vendor Laws (Q. 1-7a)	Region				Sex		Age		
	NE	S	MW	W	M	F	<30	31-44	45+
Favorable	68.6	78.0	67.4	66.7	65.5	76.7	74.7	71.7	72.9
Unfavorable	30.5	20.6	30.5	31.8	34.5	21.3	24.7	27.7	24.5
Undecided	0.9	1.4	2.1	1.5	-	2.0	0.6	0.6	2.6
Total	100.0 (105)	100.0 (141)	100.0 (141)	100.0 (66)	100.0 (203)	100.0 (253)	100.0 (158)	100.0 (159)	100.0 (192)

p < .01

Acceptability of Model Vendor Law (Q. 1-7a)	Education			Income	
	< High School	High School Grad	Any College	<\$12,000	\$12,000+
Favorable	79.6	72.6	65.1	67.9	71.5
Unfavorable	20.4	29.2	32.3	32.1	26.8
Undecided	-	1.2	2.6	-	1.7
Total	100.0 (93)	100.0 (168)	100.0 (189)	100.0 (112)	100.0 (298)

p < .05

older children or no children to favor the model ice-cream vendor law (see Table II.8). Thus, 80.1 percent of the drivers with children age 8 or younger supported this law, versus approximately 70 percent of the other drivers.

TABLE II.8

ACCEPTABILITY OF MODEL ICE-CREAM VENDOR LAW,
BY AGE OF CHILDREN

Acceptability of Model Vendor Law (Q. 1-7a)	Age of Children				
	Age 4 or younger	5-8	9-15	16-25	No Children <25
Favorable	79.0	81.3	69.6	69.4	71.0
Unfavorable	19.8	17.5	29.6	28.8	27.4
Undecided	1.2	1.2	0.8	1.8	1.6
Total	100.0 (81)	100.0 (80)	100.0 (115)	100.0 (111)	100.0 (187)

1. Ice Cream Vendors as a Safety Problem

In conjunction with the acceptability of the model vendor law, drivers were asked how serious a safety problem was created by vendors selling ice cream to children on the street. These data provide a measure of the importance of ice-cream vendors as a safety concern to drivers, and whether a countermeasure targeted at vendors was expected to have a significant impact on the number of accidents that involve children. Also, it was expected that the countermeasure would be acceptable to the extent that drivers perceived it to address a serious safety problem.

There was little consensus about the extent to which ice-cream vendors posed safety hazards (see Table II.9). The majority of respondents did feel that there were at least some safety concerns associated with having children buy ice cream from vendors; however, only 26.1 percent of the drivers and 35.3 percent of the nondrivers felt that this was a "very serious" safety problem. Less than one-third (30.5 percent of the drivers and 25 percent of the nondrivers) rated ice-cream vendors as a "not too serious" safety problem.

Table II.10 shows drivers' perceptions of seriousness, broken down by demographic characteristics. Perceptions of seriousness were consistent across three of the regions; a higher proportion of drivers in the South, however, felt that ice-cream vendors posed a very serious safety problem.

TABLE II.9

PERCEPTIONS OF SERIOUSNESS OF SAFETY PROBLEM POSED BY
ICE CREAM VENDORS, FOR DRIVERS AND NONDRIVERS

Seriousness of Safety Problem (Q. 1-7b)	Drivers	Nondrivers
Very serious	26.1	35.3
Somewhat serious	38.4	30.9
Not too serious	30.5	25.0
Undecided	5.0	8.8
Total	100.0 (456)	100.0 (68)

Perceptions of seriousness were not related to the age, sex, education, or the income level of the driver.

It was expected that drivers with young children would be most likely to feel that the ice-cream vendors posed a "very serious" safety problem. The survey results, however, do not support this expectation (see Table II.11). In fact, drivers with children age 4 or younger were the least likely to feel that they posed a very serious safety hazard. Further, regardless of whether the driver had children in any of the age categories, approximately the same proportion felt that this was "not too serious" a safety problem.

2. Relationship of Perceived Seriousness of the Problem and Acceptability

The likelihood that drivers would find the model vendor law acceptable were lower if drivers did not feel that vendors posed a safety hazard (see Table II.12). However, a substantial proportion (61.9 percent) of these drivers favored the model law nonetheless. A second finding of interest here is that the degree of seriousness attributed to the problem was unrelated to the acceptability of the countermeasure: equal proportions of drivers who felt that the situation was very serious and those who thought it was somewhat serious

TABLE II.10

DRIVERS' PERCEPTIONS OF SERIOUSNESS OF SAFETY PROBLEM POSED BY
ICE-CREAM VENDORS, BY DEMOGRAPHIC CHARACTERISTICS

Seriousness of Safety Problem (Q. 1-7b)	Region				Sex		Age		
	NE	S	MW	W	M	F	<30	31-44	45+
Very serious	20.2	34.1	28.8	20.0	23.0	28.5	22.8	25.6	30.7
Somewhat serious	46.8	31.2	39.1	35.0	39.2	37.5	46.2	37.5	31.8
Not too serious	28.4	30.7	27.0	32.5	32.9	28.5	26.6	32.5	30.3
Undecided	4.6	4.0	5.1	12.5	4.4	5.5	4.4	4.4	7.2
Total	100.0 (105)	100.0 (141)	100.0 (141)	100.0 (66)	100.0 (204)	100.0 (253)	100.0 (158)	100.0 (160)	100.0 (195)

Seriousness of Safety Problem (Q. 1-7b)	Education			Income	
	< High School	High School Grad	Any College	<\$12,000	\$12,000+
Very serious	35.5	26.2	20.5	25.0	24.1
Somewhat serious	35.5	36.3	42.1	39.3	40.5
Not too serious	24.7	32.1	32.1	30.3	31.8
Undecided	4.3	5.4	5.3	5.4	3.7
Total	100.0 (93)	100.0 (168)	100.0 (190)	100.0 (112)	100.0 (299)

TABLE II.11

DRIVERS' PERCEPTIONS OF SERIOUSNESS OF SAFETY PROBLEM
POSED BY ICE-CREAM VENDORS, BY WHETHER DRIVER HAS
CHILDREN OF VARIOUS AGES

Seriousness of Safety Problem (Q. 1-7b)	Age of Children				
	Age 4 or younger	5-8	9-15	16-25	No Children <25
Very serious	19.8	28.8	29.6	23.4	26.1
Somewhat serious	45.7	33.7	34.8	37.8	41.5
Not too serious	29.6	32.5	29.5	33.3	28.2
Undecided	4.9	5.0	6.1	5.4	4.2
Total	100.0 (81)	100.0 (80)	100.0 (115)	100.0 (111)	100.0 (188)

TABLE II.12

ACCEPTABILITY OF MODEL VENDOR LAWS BY PERCEPTIONS
OF SERIOUSNESS OF SAFETY PROBLEM POSED BY
ICE-CREAM VENDORS

Acceptability of Model Vendor Law (Q. 1-7a)	Seriousness of Safety Problem		
	Very Serious	Somewhat Serious	Not Too Serious
Favorable	74.9	74.1	60.6
Unfavorable	24.3	24.8	38.0
Undecided	0.8	1.1	1.4
Total	100.0 (119)	100.0 (175)	100.0 (139)

avored the model law. It is also noteworthy that defining the problem as acute did not necessarily mean that the model law would be acceptable. Even if the situation was considered a very serious safety problem, almost 25 percent of the drivers rejected the idea of requiring ice-cream vendors to use special signal lights.

C. MODEL PARKING LAWS

The model parking regulations would (1) forbid parking near crosswalks and (2) institute angle, as opposed to parallel, parking where appropriate. Both are intended to make pedestrians and on-coming cars more easily visible to each other.

Reactions to the two regulations were quite different during the focus-group discussions. Prohibiting parking near street corners and crosswalks was a familiar and justifiable restriction and was entirely acceptable. In contrast, replacing parallel parking with angle parking was challenged on the grounds of merit (angle parking was seen to be more dangerous), feasibility (few streets were considered to be wide enough), necessity (if the street were wide enough for angle parking, one would have good visibility anyway), and benefits (other parking situations--such as blocked crosswalks--were considered to be the problem, not angle versus parallel parking).

Public reactions to the model parking regulations were obtained in terms of the acceptability and perceived effectiveness of each. Given the skepticism expressed by focus-group discussants about angle parking, the perception of effectiveness for purposes of the survey was measured in terms of respondent preconceptions about the relative value of angle versus parallel parking. The survey instrument contained the following question sequence:

I would also like to get your reaction to some proposed laws intended to increase the safety of pedestrians crossing the street.

- a. One suggestion for making it easier for drivers and pedestrians crossing the street to see each other is not to allow cars to park near street corners. Do you favor or oppose a law prohibiting parking near street corners?
- b. In your opinion, when cars are not allowed to park near street corners, does this reduce the number of pedestrian accidents a lot, a little, or not at all?

- c. Two ways that cars can be parked are (1) parallel, with the side of the car right next to the curb, or (2) at an angle, where you drive the front of the car up to the curb. If someone were crossing the street between two parked cars, when would it be easier for a driver and a pedestrian to see each other--when cars are parked next to the curb, or when they are parked at an angle to the curb?
- d. (As you know/Actually) it is easier for pedestrians--especially children--and drivers to see each other when cars are parked at an angle to the curb. It has therefore been suggested that in areas with lots of children and which have wide enough streets, the laws require cars to park at an angle to the curb. Do you favor, or do you oppose, such a law.

The high degree of respondent support for the model parking regulations indicates that both were highly desirable countermeasures (see Table II.13). Among drivers, 88 percent favored prohibiting parking near street

TABLE II.13

ACCEPTABILITY OF PARKING REGULATIONS,
FOR DRIVERS AND NONDRIVERS

Acceptability	No Parking Near Corners (Q. 2-5a)	Angle Parking (Q. 2-6b)
Drivers		
Favor	88.0	80.7
Oppose	10.1	16.8
Undecided	1.9	2.5
Total	100.0	100.0
Nondrivers		
Favor	85.2	91.8
Oppose	11.5	6.6
Undecided	3.3	1.6
Total	100.0	100.0
	(61)	(61)

corners, and 80.7 percent favored angle parking. With respect to angle parking, it should be noted that the direction of responses may have been influenced by the information provided--that it is in fact a safer method, and that it would be implemented only in areas with many children and on streets that are wide enough. Support for angle parking was especially strong among nondrivers, 91.8 percent of whom favored this alternative to parallel parking.

Table II.14 shows the acceptability of model parking regulations by demographic characteristics. The proportion of drivers who favored prohibiting parking near street corners was very similar across geographic regions. There also were no differences by the sex, age, education, or income level of the driver.

Drivers' reactions to angle parking were also very similar across regional, educational, and income levels. Slight variations occurred between male and female drivers: a larger proportion of females (85.7 percent) than males (75.9 percent) favored angle parking. Younger drivers (under age 45) were also somewhat more likely than older drivers to favor angle parking. Two factors that may have been operating in the sex and age difference were (1) angle parking may have been considered easier and more convenient, and (2) parallel parking may have been a habit that some drivers were reluctant to alter.

1. Perceived Effectiveness of Model Parking Regulations

For most of the drivers surveyed, having cars or trucks parked near street corners was considered an accident-prone situation. For 53.2 percent of the drivers, establishing no-parking zones near street corners or crosswalks would have "a lot" of impact on reducing accidents (see Table II.15). Very few drivers (only 6.2 percent) felt that this regulation would have no impact at all on accident rates.

The only demographic subgroup with different opinions about the degree of effectiveness of this regulation was drivers with higher educational levels (see Table II.16). Drivers with some college education were less likely than other drivers to expect a lot of reduction in accidents; whereas 59.7 percent of the drivers with less than a high school education felt there would be a lot of impact, the proportion dropped to 47.1 percent for the higher education group. Perceived effectiveness did not vary across region or by the sex, age, or income level of the driver.

TABLE 11.14

ACCEPTABILITY OF PARKING REGULATIONS,
BY DEMOGRAPHIC CHARACTERISTICS

Acceptability of Parking Near Corners (Q. 2-5a)	Region				Sex		Age			Education			Income	
	NE	S	MW	W	M	F	<30	30-44	45+	<High School	High School Grad	Any College	<\$12,000	\$12,000+
Favor	89.1	89.6	88.9	82.9	88.4	87.6	87.7	89.6	87.8	88.0	89.3	88.2	88.8	89.4
Oppose	8.9	8.9	9.4	14.5	9.8	10.5	9.2	8.9	10.8	9.0	8.8	10.7	9.2	9.2
Undecided	2.0	1.5	1.7	2.6	1.8	1.9	3.1	1.5	1.4	3.0	1.9	1.1	2.0	1.4
Total	100.0 (101)	100.0 (135)	100.0 (117)	100.0 (76)	100.0 (224)	100.0 (209)	100.0 (130)	100.0 (145)	100.0 (147)	100.0 (67)	100.0 (159)	100.0 (186)	100.0 (98)	100.0 (294)
Acceptability of Angle Parking (Q. 1-6b)														
Favor	81.2	83.7	77.8	78.9	75.9	85.7	83.8	83.0	76.2	80.6	83.0	79.1	83.7	81.3
Oppose	16.8	14.1	19.6	17.2	21.4	11.9	15.4	13.3	21.1	19.4	15.1	17.1	14.3	16.3
Undecided	2.0	2.2	2.6	3.9	2.7	2.4	0.8	3.7	2.7	0.0	1.9	3.8	2.0	2.4
Total	100.0 (101)	100.0 (135)	100.0 (117)	100.0 (76)	100.0 (224)	100.0 (210)	100.0 (130)	100.0 (145)	100.0 (147)	100.0 (67)	100.0 (159)	100.0 (187)	100.0 (98)	100.0 (295)
	p < .05													

TABLE II.15

PERCEIVED EFFECTIVENESS OF THE TWO MODEL
PARKING LAWS

Reduction in Accidents with No Parking Near Corners (Q. 2-5b)		Preconception about Method with Greater Driver/Pedestrian Visibility (Q. 2-6a)	
A lot	53.2%	Parallel	60.4%
A little	36.4	Angle	32.3
Not at all	6.2	No difference	2.1
Undecided	4.1	Undecided	5.3
Total	100.0 (434)	Total	100.0 (434)

With respect to drivers' preconceptions about whether angle or parallel parking facilitated visibility, we found that most drivers were misinformed (see Table II.15). Parallel parking was considered more conducive to visibility by 60.4 percent of the drivers. Approximately one-third (32.3 percent) correctly identified angle parking as the safer method.

When drivers' opinions about parallel versus angle parking were considered in relation to demographic characteristics (see Table II.16), a fairly wide difference of opinion existed along educational levels. The results, however, were in the opposite direction from what were expected: drivers with higher educational levels were much more likely than drivers with lower educational levels to identify parallel parking as more conducive to visibility: 66.9 percent (higher education drivers) versus 49.2 percent (lower education drivers). The distribution of drivers' opinions across the other demographic characteristics was quite similar.

2. Relationships of Acceptability and Perceived Effectiveness

Since prohibiting parking near crosswalks was so widely accepted by the drivers surveyed, perceptions of effectiveness were not very valuable in explaining either the acceptance or rejection of the countermeasure. What the relationships between acceptance and perceived effectiveness do underscore, however, is that, for this countermeasure, the expectation that there would be .

TABLE 11.16

PERCEIVED EFFECTIVENESS OF PARKING REGULATIONS,
BY DEMOGRAPHIC CHARACTERISTICS

Reduction in Accidents with No Parking Near Corners (Q. 2-5b)									Education					
	Region				Sex		Age			<High School	High School Grad	Any College	Income	
	NE	S	MW	W	M	F	<30	30-44	45+				<\$12,000	\$12,000+
A lot	58.4	48.1	52.1	55.3	51.8	54.8	53.8	51.1	55.8	59.7	58.5	47.1	51.0	53.6
A little	30.7	42.2	38.5	32.9	38.8	33.8	37.7	40.0	31.3	26.9	35.2	40.1	38.8	36.3
Not at all	5.9	6.7	4.3	9.2	6.3	6.2	6.2	5.2	6.8	7.4	3.8	8.0	7.1	6.1
Undecided	5.0	3.0	5.1	2.6	3.1	5.2	2.3	3.7	6.1	6.0	2.5	4.8	3.1	4.1
Total	100.0 (101)	100.0 (135)	100.0 (117)	100.0 (76)	100.0 (224)	100.0 (210)	100.0 (130)	100.0 (135)	100.0 (147)	100.0 (67)	100.0 (159)	100.0 (187)	100.0 (98)	100.0 (295)
p < .05														
Parking Which Makes for Easier Driver- Pedestrian Visibility (Q. 2-6a)														
Next to curb	62.4	57.0	57.3	67.1	62.0	58.6	66.2	57.0	59.9	49.2	58.5	66.9	57.1	62.4
Angle	32.6	34.1	35.9	23.7	30.8	33.8	30.0	39.2	26.5	38.8	36.5	26.2	37.8	30.2
Both same	0.0	3.0	1.7	3.9	2.7	1.4	0.0	1.6	4.1	1.5	1.9	2.1	0.0	2.7
Undecided	5.0	5.9	5.1	5.3	4.5	6.2	3.8	2.2	9.5	10.5	3.1	4.8	5.1	4.8
Total	100.0 (101)	100.0 (135)	100.0 (117)	100.0 (76)	100.0 (224)	100.0 (210)	100.0 (130)	100.0 (145)	100.0 (147)	100.0 (67)	100.0 (159)	100.0 (187)	100.0 (98)	100.0 (295)
p < .01														

only "a little" reduction in accidents did not preclude acceptance: 90.5 percent of these drivers favored this parking restriction.

TABLE II.17

ACCEPTABILITY OF MODEL PARKING LAWS, BY
PERCEIVED EFFECTIVENESS

Acceptability of No Parking Near Corners (Q. 2-5a)	Reduction in Accidents		
	A lot	A little	Not at all
Favorable	93.1	90.5	40.7
Unfavorable	5.2	8.2	55.6
Undecided	1.7	1.3	3.7
Total	100.0 (231)	100.0 (158)	100.0 (27)

p < .001

Acceptability of Angle Parking (Q. 2-6b)	Preconception about Method with Greater Visibility	
	Angle Parking	Parallel Parking
Favorable	95.7	71.8
Unfavorable	4.3	25.2
Undecided	-	3.0
Total	100.00 (140)	100.0 (262)

p < .001

With their misconception about parallel parking corrected, 71.8 percent of the drivers who formerly felt that parallel parking allowed for greater visibility favored angle parking. Nevertheless, because of possible objections to angle parking or because the information may not have been credible to them, 25.2 percent of the drivers who originally opted for parallel parking did not change their preference.

D. SUMMARY

The survey results suggest that drivers as well as nondrivers were highly receptive to plans for increasing the safety of pedestrians, especially children. Most of the drivers surveyed responded favorably to all of the pedestrian countermeasures. Safety training for children and prohibiting parking near crosswalks were especially acceptable, each of which receiving support from 88 percent of the drivers. The salience and priority given to the street-safety training was accentuated by drivers consistently choosing a rigorous and wide-reaching implementation for this countermeasure--using existing institutional settings, having training conducted during regular school hours, and requiring that all children participate in the training.

Angle parking and the model vendor law ranked somewhat lower in acceptability than the other two pedestrian countermeasures, receiving support, respectively, from 80.7 percent and 71.6 percent of the drivers surveyed. It is noteworthy that both of these countermeasures, by requiring some change in current practice and driving habits, would have some immediate implications for drivers in general.

Two additional patterns characterize the findings on pedestrian-safety countermeasures. First, perceived need and perceived effectiveness did not necessarily have to be very pronounced for the countermeasures to be acceptable. Drivers were almost equally likely to support the model vendor law regardless of whether they felt it represented a "very" serious or "somewhat" serious safety problem; prohibiting parking at crosswalks was also acceptable for most drivers, regardless of whether it was expected that the number of accidents would be reduced a lot or a little. Second, attitudes toward these countermeasures tended to be a function of educational level. Drivers with higher educational levels were less likely to favor both the special safety training and the model vendor laws. Higher educational levels were also associated with lower perceptions of need (seriousness of problem) for the model vendors, and with perceptions of less effectiveness with the model parking laws.

III. SPECIAL INTEREST GROUP STUDY

Special-interest perspectives were included in this research in an effort to identify expert and leadership opinion about highway-safety countermeasures. The reader is cautioned, however, that respondents in this study do not constitute a statistically representative sample, and their reactions to the countermeasures should not be generalized to special-interest groups as a whole. Further, although respondents were selected because of their affiliation with certain groups and they responded from that vantagepoint in most cases, they were not acting as official spokespersons for those groups and their position should not be construed as the official position of that organization. Readers should consult Volume I (Chapter II) of this report for a detailed description of the methodology employed for the special-interest study.

The following reactions by special-interest respondents were based on brief and very general descriptions of the countermeasures. The intent was to present the overall concept and to allow specific issues and areas of concern to surface through informal, open-ended discussions. It is important to recognize that the reactions represent opinions and judgments and are not necessarily definitive analyses of the highway-safety issues discussed. Special-interest perceptions of these countermeasures can be especially useful to highway-safety planners in formulating appropriate educational programs and implementation strategies.

The following descriptions of the pedestrian-safety countermeasures were presented to special-interest respondents:

Special training on street safety would be given to children up to the age of eight. Training would be provided on streets that have been closed off, except to cars driven by specially trained drivers. Training would cover situations in which children make the most serious mistakes, such as crossing in the middle of a block or playing near streets. Children would then be shown what they should do in such situations to avoid an accident.

Vendor regulations would require ice-cream trucks to activate a special signal light when they have stopped at the side of a road or street. Cars coming from either direction would have to come to a stop before passing.

Parking regulations would be put into effect that would (1) forbid parking near street corners and crosswalks, and (2) require that parking be at an angle, as opposed to parallel, to sidewalks. These regulations are intended to make pedestrians and oncoming cars more easily visible.

The three pedestrian countermeasures were of relatively low interest to special-interest respondents, and generated few and, then, primarily low-key reactions. Of these three countermeasures, special training on street safety was the most positively received; the typical position was that child safety is inherently an important concern and warrants special attention. The vendor regulations and angle parking, on the other hand, tended to be opposed--vendor regulations because respondents tended to believe that ice-cream trucks have become scarce and pose street-safety hazards only in very isolated instances, if at all, and angle parking because backing up into traffic was thought to create a much more dangerous situation than exists with parallel parking. Interest in pedestrian safety was concentrated among four of the special-interest groups--the AAA, highway-safety departments, police chiefs, and the insurance industry. For respondents from the other groups, the pedestrian aspect of highway safety was a relatively low priority (for state police and trucking associations) or did not touch upon any particular area of expertise (respondents from the ACLU, bar associations, and auto-dealers associations).

A. SPECIAL TRAINING ON STREET SAFETY

Safety training for children has a special status in the highway-safety area. Safety for children is an emotional cause--it is implicitly "a good thing," and it is "obviously very, very important." Supporting safety programs for children is also good public relations and good politics:

"It's an apple-pie issue. It has no constituency opposed to it." (Highway-safety department respondent)

"The political system responds to the emotional demands of the public, and to [State's] public demands that a disproportionate amount of money be spent on the safety of children." (State police respondent)

The special-training countermeasure was lauded because of the age of the children to be trained: training at an early age was considered pedagogically astute programming. AAA respondents stressed that it was "very sound to get

them at an early age," and that "the earlier you get to the child--be it for walking or driving--the better for that child in the long run." Setting good safety habits at an early age was also considered to be a good investment, and more constructive than "un-learning" programs at a later time. The concept of creating "real-life" situations for the special training was another basis for the strong support for this countermeasure. "Hands-on learning" and "realistic circumstances" would be more conducive than classrooms to provide meaningful and effective education in appropriate safety behavior.

In a few instances, however, the use of controlled street settings was questioned as possibly reducing the child's perception of risk. By increasing children's exposure to these situations, "playing near streets" may become more familiar and less forbidding. A police-chief respondent indicated that it was "dangerous to show kids the example of playing in or near streets, because children imitate too much." An insurance respondent was concerned that this type of training might backfire if children, and parents, acquired a "false sense of security" about street safety; removing the fear of danger may cause overconfidence and make children more vulnerable to street hazards. The idea of training for purposes of behavior modification and habit-formation was an ineffective approach, according to one bar-association respondent, who felt that focusing on the person, as opposed to other properties of the situation, was misguided:

"All training puts emphasis on the wrong area. Everybody makes mistakes. [They would] have to make things idiot-proof. [The] real emphasis should be on making things fool-proof--that's the key to safety."

Several respondents made their support of the program conditional on parental support and involvement. It was argued that the program could not be effective if parents did not reinforce the instruction provided by the schools. Because parents are so central in a child's behavioral development and in shaping the child's safety attitudes, "without parental guidance, school programs can't be effective [and] will be only a band-aid remedy." Whereas one respondent (a police chief) felt that this program was vital because "parents often do not want to take on the responsibility of their children's safety," a trucking-association respondent thought that the parents should be made familiar with what their children are being taught, "so they can back up the effort with

continued parental guidance and discipline." It is exactly this use of parental cooperation which an AAA respondent felt made their "Pre-School Children in Traffic Program" superior:

"The program includes booklets that provide information for parents to take their children out to the street and lead them through the safety measures. We feel that 'special classes' [are something] parents can do on their own."

One consistent theme in discussions of the special-training countermeasure was the cost of such a program. Support for the program notwithstanding, the realities of stringent budget limitations were frequently an integral part of respondents' reactions to the program and a definite constraint on perceptions of program feasibility:

"Nice, but utopian because of financial problems." (Highway-safety department respondent)

"[State] is too poor to make school training a priority." (Highway-safety department respondent)

"Who will pay for the training will be an issue." (AAA respondent)

Interestingly, opposition on the basis of cost was sometimes attributed to the general public. Despite the acceptability of the program's goals, public resistance to any additional public expenditures may lead to a reconsideration of its value and necessity:

"Public would support it if it didn't cost money." (Police chief respondent)

"Public would support it unless the financial and logistical costs were explained to them." (AAA respondent)

B. VENDOR REGULATIONS

Ice-cream vendors were not considered to be a significant safety problem, and special vendor regulations and signal lights were deemed unnecessary and irrelevant for most communities. Vendors tended to be ranked as a minor safety problem both because they were thought to be quite rare and because respondents were largely unaware that ice-cream vendors posed real safety hazards:

"It's silly. [I] never heard of a problem with it here."
(Highway-safety department respondent)

"[There are] not too many around anymore. . . . Not too
necessary." (Police chief respondent)

"There are not enough ice-cream trucks for this." (State
police respondent)

"There are no ice-cream trucks in [State]." (Bar association
respondent)

"Few accidents are linked to vendors." (Trucking association
respondent)

"Ice-cream truck accidents don't seem to be all that common."
(ACLU respondent)

The vendor regulation was objectionable to a number of respondents because it was seen as imposing an inconvenience on the general public in order to aid and protect a business operation. It was unacceptable to give a vendor the discretion and power to stop traffic. The regulation was seen as providing the vendor with a safer and more convenient situation in which to conduct his or her business. An AAA respondent argued that giving vendors special privileges would cause legal and political problems: "This would give a commercial enterprise favorable treatment on city streets. The driver would make a public street his selling ground." Similarly, a bar-association respondent indicated that businesses that require special safety regulations need not be accommodated: "Outlaw the ice-cream trucks. They create an accident situation for profit. We don't have to let people carry on their business in the streets." Along these lines, there was some concern that vendors not be placed in the same category as school buses. A state-police respondent wanted to limit government involvement in child safety: "School buses must be kept unique. It is not the responsibility of government to protect children in all situations, but [it is instead] the parents' responsibility." A highway-safety respondent was concerned that signal lights might become overused and thus ineffective: "The vendor lights would take away from the value of the amber lights of school buses and other emergency vehicles."

The necessity of coming to a full stop was a particularly troublesome part of this regulation for some respondents. The full stop was considered an extreme and unnecessary requirement. A signal light alone was considered

sufficient to alert drivers: "Lights would be a good warning, but it's not necessary to stop, just to slow down maybe." A trucking-association respondent felt that the light was even (or should be) superfluous for drivers, who should already be conditioned to respond appropriately in the vicinity of an ice-cream truck:

"These vendors already have bells and other ways of attracting children, and these same noises also serve to notify drivers. Most drivers already know that children will swarm like bees to an ice-cream truck, and that they should drive very cautiously. The extra light won't make a difference if a driver doesn't know this basic driving rule."

The vendor regulation may also create safety hazards. Having such a regulation may actually encourage children to run into the street--either toward an ice-cream truck or in a general way--thinking they are safe. According to a state-police respondent, signals on school buses remain a controversial issue, since they can cause very dangerous situations: "One car stops and taunts a child out in the street [in front of] another car which is not going to stop." For this reason, an AAA respondent reported that they have been opposing legislation of this type: "We feel these arms extending into the streets and the lights flashing lend a false sense of security to kids."

Finally, vendor regulations were opposed as a reaction against over-regulation. Respondents expressed a resistance to any further proliferation of rules and restrictions. Any additional signal lights would be "a nuisance." In addition, it was felt that "there are too many signs for people to read already. It just makes life more complex."

C. PARKING REGULATIONS

Based on the reactions of special-interest respondents, prohibiting parking near street corners is already in effect in most areas, and is an effective pedestrian-safety countermeasure. This effectiveness, however, is frequently limited by the lack of enforcement. The only issue raised in conjunction with this regulation was that without adequate attention to such an enforcement regulation, it should not be instituted.

In contrast to the widespread support for prohibiting parking near street corners, angle parking was subject to sharp criticism. Angle parking was

evaluated from four standpoints: (1) its impact on accident rates; (2) public attitudes toward it; (3) its implications for businesses; and (4) its feasibility given spatial constraints.

Higher risks associated with backing out of the parking space and obstructed vision for the driver undermine the safety benefits that angle parking may have for the pedestrian. Although pedestrians may be more visible to oncoming traffic, respondents made the point that the movement of the parked car is precarious and hazardous (both pedestrians and other cars are less visible to the driver), thus placing responsibility for avoiding an accident on oncoming traffic. Furthermore, angle parking reduces free space in the street, thus making it more difficult for the oncoming car to avoid accidents. As indicated by the following comments, angle parking would place drivers, as well as pedestrians, in situations that would increase the likelihood of accidents:

"It's the worst way [and] most hazardous. It's bad for pedestrians and cars. Cars back out and will hit [a] pedestrian or [another] car--not serious accidents but numerous." (Highway-safety department respondent)

"In [State] we discourage diagonal parking because it gives the driver no view at all and causes a lot of accidents." (Highway-safety department respondent)

"Angle parking creates backing-out accidents. It causes more accidents." (State police respondent)

"It's more dangerous than parallel parking because you have more car to look around." (Police chief respondent)

"[It is] very impractical [and] more of a hazard than parallel parking." (Bar association respondent)

"It's a thing of the past. Angle parking is dangerous for everybody." (Trucking association respondent)

"It's far more dangerous due to backing out. People tend to back out without looking." (Auto dealers association respondent)

Some of the negative assessments of angle parking were based on specific experiences with it; in several instances, localities have abandoned it because it was shown to be the primary factor in minor accidents. A police chief reported that as a result of the high rate of "backing-out" accidents with angle parking, the town changed back to parallel parking, and "there has been no

change in the pedestrian accident rate since that change." A highway-safety respondent indicated that the case against angle parking became very apparent to him after examining accident statistics:

"Last year we were called to one town to help them analyze their accident problem. They were interested in the drunken-driver problem. When we examined their records, we found more than 50 percent of their accidents occurred due to angle parking, whereas the drunken driver causes less than 10 percent."

Public support for angle parking was expected to be quite high because of the greater ease in parking. Since parallel parking is more difficult and cumbersome, the public would prefer angle parking because it is relatively effortless. Merchants were also expected to support (in fact, to advocate) angle parking because it offered a business advantage to them. With angle parking, business streets can accommodate a larger number of cars, thereby improving customer access to shops.

One consideration that rendered angle parking a moot issue for many respondents is the physical restriction of street size. Few streets were thought wide enough for angle parking to be a real possibility. A highway-safety respondent dismissed its feasibility for large segments of the country: "There is no room east of the Mississippi River for angle parking."

D. SUMMARY

The pedestrian-safety countermeasures elicited mostly low-key, passive reactions from special-interest respondents. Special training for children was the most favorably received. The fact that this program would address the safety problems of children, that the target age was fairly young (up to the age of eight), and that a "real-life" setting was used were cited as important assets of this countermeasure. Parental involvement was considered critical for reinforcing and supplementing the training program. The primary concerns were that this training not detract from the academic function of schools, and that it not so "de-mystify" streets that children would take fewer precautions.

The ice-cream-vendor countermeasures received largely negative comments. It must be stressed, however, that respondents were not objecting to the countermeasure itself but, rather, were questioning whether the scope of the problem (the prevalence of such vendors) warranted any action at all.

Similarly, many respondents (primarily those with highway-safety implementation and enforcement functions) felt that, all risks considered, parallel, not angle, parking was the safer mode. Recognizing the safety benefits of angle parking for pedestrians, respondents nonetheless argued that the other dangers (i.e., the greater likelihood of accidents from backing-out, reduction in street space, etc.) clearly offset the safety advantages. Thus, respondents tended to focus on the possible liabilities of angle parking, rather than on the existing risk to pedestrians when crossing the street between parallel-parked cars.