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Transmitted by the National Federation of the Blind  
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### The Danger Posed by Silent Vehicles

On behalf of the National Federation of the Blind, the oldest and largest organization of the blind in the United States and a leader in advocating for the rights of the blind around the world, I thank you for the opportunity to address this body today. I have come here because I share with you an interest in the subject of how automobiles should sound. I suspect, however, that our views on that subject may be somewhat different. Most of you have focused a great deal of your time and energy on making car engines quieter. This pursuit is not a bad thing. The reduction of unnecessary noise enhances the quality of life for all of us. But I have come to speak to you today because I believe that we have reached the point at which automobiles have become too quiet. In fact, I know from personal experience and the experiences of my friends and colleagues in the National Federation of the Blind that some automobiles are now totally silent, at least when they are traveling at low speed. In saying that automobiles are too quiet, I am not saying that they should sound as they did fifty or even twenty years ago. There is no need for any modern automobile to sound like a souped-up 1959 Chevy with twin pipes. What I am saying is that automobiles that make no sound at all are unsafe.

In the United States, it is common practice for parents, teachers, and other adults in authority to tell children to “stop, look, and listen” before crossing the street. The message of this simple instruction is clear: One should not walk into the street without first carefully assessing the situation, and one should use both one’s eyes and one’s ears in determining whether it is safe to proceed. Listening to the sound of traffic, as well as observing it visually, ensures the safety of all pedestrians.

Blind people, of course, cannot follow the “stop, look, and listen” directive to the letter. Our vision is either very limited or of no use to us at all. Our sense of hearing is the only one that we can reliably employ to tell us about automobile traffic. Until now, it has been enough, and blind people have traveled safely and independently. I myself have traveled throughout the United States and all over the world using the alternative techniques of blindness.

Blind people travel by using our sense of touch and our sense of hearing to tell us about our environment. Our canes or guide dogs help us to identify and avoid objects in our path, to anticipate steps or curbs, and to keep from dropping into open manholes. The objects we touch with our canes give us clues to where we are and help us to avoid obstructions and other hazards. But only our ears can tell us about the flow of traffic. By listening, we can learn whether an intersection is controlled by a traffic light and what color the light is. When we hear traffic moving perpendicular to us, we know that we are not free to walk; when we hear traffic begin to move parallel to us, we know that the traffic light has changed and that it is now safe to proceed into the crosswalk. The sound of traffic also tells us whether an individual automobile is slowing down, speeding up, or turning to the left or to the right. All of the information we need about how traffic flows at a given intersection, and thus how we should proceed in navigating that intersection, comes from the sound of traffic and from no other source. The most useful information comes from vehicles that are idling, accelerating, or decelerating, since the sound of these vehicles gives us a clear picture of exactly when signals are changing; we can therefore gauge how much time we have to navigate the crossing.

A few years ago, blind people began to notice that there are some cars we cannot hear. Automobiles have probably been growing quieter for some time, but these new cars are not merely quiet--some of them are absolutely silent. The National Federation of the Blind has conducted tests with blind volunteers to verify this fact. Most of these potential silent killers of blind people are hybrid cars like the Toyota Prius, but electric cars pose the same threat. The problem is not that the sound of these cars is more subtle than that of previous cars or merely different from what we are used to; rather, when they are traveling at slow speeds, these cars make no sound detectable by the human ear. As I have said, blind travelers gain the most useful information about traffic when cars are accelerating or decelerating, and this is precisely the time when many new vehicles are soundless. The one reliable clue that gives us the information we need to navigate safely is not available to us when a silent car is involved. For us, these cars are invisible. Because they are invisible, catastrophe is inevitable.

New vehicles using hybrid and electric technology are said to have many benefits; they save gasoline and do not release as many harmful pollutants into the air. For these reasons, they are already quite popular, and their use is likely to increase substantially. In fact, some states in my country, including my home state of Maryland, are requiring that more of these vehicles be sold. The National Federation of the Blind is not opposed to vehicle designs that protect the environment. But these new vehicles are unintentionally placing blind people and others at risk. At the present time, the number of cars being driven on the street that are "invisible" to blind travelers is not large, but it will increase. Not only that, but even cars with internal combustion engines are growing quieter, and there may come a time when the gasoline engine is also soundless. If this happens, and no steps are taken to make these cars safe, then tragedy will

result. Blind people, as well as other pedestrians, cyclists, runners, and small children, will be killed in ever-increasing numbers. Unless the blind are willing to become prisoners in our homes and forego participation in work, school, church, and community life (which we are not willing to do), those of us who are blind will find that it is only a matter of time before one of us is struck and killed by a car. I am here today to ask this body to act before that happens.

In order for cars to remain safe for blind pedestrians (and for small children, cyclists, runners, and other pedestrians), cars must emit an omnidirectional sound with similar spectral characteristics to the sound of a modern internal combustion engine. By this I mean simply that a vehicle should sound like a vehicle and that the sound vehicles make must be uniform and distinct from other sounds in the environment. Like the sound of a combustion engine, the sound of vehicles should vary depending on whether the car is at a full stop, accelerating, moving at a constant speed, or decelerating. This body should establish a minimum sound standard that will meet these requirements. That standard should specify the characteristics, including the volume, of the sound to be emitted by all automobiles. The sound need not be overly loud or unpleasant to hear; noise pollution is a serious concern, as any blind person who has ever tried to listen to the pattern of traffic over the sound of a bus, cargo truck, or jackhammer can tell you. The sound need only be loud enough so that a person can hear it from a sufficient distance to make an intelligent judgment about the vehicle's location, direction, and speed in time to avoid danger.

The National Federation of the Blind is not suggesting what technology or method should be employed in order to make the minimum level of sound necessary for an automobile to be pedestrian-safe. We are confident that automobile manufacturers are more than capable of finding innovative and cost-effective ways to meet such a minimum sound standard. We are also certain that components to comply with a minimum sound standard will not affect the environmental benefits of new vehicle technology. I am asking those of you who have input into the design of automobiles to work with us to find a satisfactory solution that properly balances the desire for an environment free of air pollution and unnecessary noise with the safety of pedestrians. I have faith that, if we work together, such a solution is readily achievable.

The National Federation of the Blind has been raising the alarm about quiet cars for well over three years now. While many recognize that our concerns are valid, a few argue that we are being unduly alarmist. They say that there is not enough evidence of accidents involving blind pedestrians and hybrid vehicles and that people must die before any action is taken. While it is true that we know of no deaths directly attributable to silent cars, we know of many near misses. As an example, a blind gentleman from Iowa recently told me that a car he did not hear ran over his cane as he was crossing the street. Such incidents are frequent enough that the National Federation of the Blind has drafted legislation for consideration by the Congress of the United States and by state

legislatures within the United States. This legislation would require a minimum sound standard for new automobiles. We are also recommending that organizations of blind people around the world consider similar statutory proposals. Deaths resulting from blind people struck by silent cars are inevitable if steps are not taken now, and even one needless death is too many. Our safety and freedom are at stake; we will not wait until there is a body count.

Still others who are critical of the position of the National Federation of the Blind suggest that something other than a sound made by automobiles themselves is the proper solution to the problem. They propose that the blind should carry some sort of device that will detect the presence of a hybrid car and alert us by beeping or vibrating. At the present time, however, we do not see how such technology, even if plausible and affordable, can be a real solution. How would such technology alert us to the direction, speed, and precise location of the vehicle? What if there were more than one vehicle? What if the blind traveler has inadvertently left the device at home, or its batteries have run out, or it simply fails to work properly? And what about the other pedestrians, not to mention bicyclists and small children, who may be caught unawares by the approach of a silent car? Must every pedestrian carry yet another piece of technology on his or her belt to do what used to be done by the senses nature has given us? At some point in the future, technology may provide a solution that keeps pedestrians safe reliably enough to eliminate the need for vehicles to emit sound. Perhaps vehicles will pilot themselves and be equipped with technology that can detect and avoid obstacles, including pedestrians, with flawless precision. But for the foreseeable future, I do not trust technology to do for me what my ears have always done perfectly well, any more than you trust a computer to drive your car. Components that cause a car to emit a detectable sound are the simplest and most effective solution to the problem posed to the blind and other pedestrians by silent cars.

The promise of new automobile technology is a safer, cleaner, and healthier environment. It will be a sad irony if, through mere oversight, new cars become instruments that destroy life instead of protecting it. If these cars are not made safe for pedestrians, then their promise of a better life for us all will simply be a lie. But if you act now to ensure that vehicles continue to give adequate warning to all pedestrians, both blind and sighted, the objections of the blind to this new technology will have been met, and the world will be safer and better for all of us. Please join the National Federation of the Blind in ensuring that the sidewalks and streets of the world are places where those who drive and those who do not can move with safety and freedom. Thank you.

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