

# Acoustics and Technology: A Hard of Hearing Perspective

Ruth Warick, Director  
Disability Resource Centre  
The University of British Columbia  
1874 East Mall  
Vancouver, B.C.  
V6T 1Z1

At one time the emphasis was on the rehabilitation of the individual with the individual being required to adapt to the environment. Over the last two decades recognition has occurred that environmental adaptations are also required. Thus, it is recognized that both individual habilitation and environmental adaptations are essential.

The Canadian Hard of Hearing Association, a non-profit self-help organization consisting primarily of hard of hearing persons, works as an agent for change for both individual habilitation and environmental adaptations. CHHA numbers close to 2,000 members who have a hearing loss and rely on aural means of communication and sometimes the use of assistive listening devices. The prime concerns of CHHA members are hearing health care, better listening environments, public awareness about noise pollution, education, and employment. The latter two issues were identified through a national youth study undertaken by CHHA<sup>1</sup> and the others in a study undertaken by Marilyn Dahl last year.<sup>2</sup>

The CHHA survey about hard of hearing youth found that access is a major difficulty. In asking young hard of hearing persons about their experiences in everyday life, the survey found that about half had difficulty watching television, over half cited difficulties using the phone, and most cited difficulties hearing in small groups, in restaurants and public places.

The survey found that technical and environmental supports are not widely used in all settings. While use of FM or infrared hearing systems in the schools is quite good, with 50 percent of youth using such systems, in a public place the usage of such systems dropped to eight percent. However, 40 percent of survey respondents said they would welcome the use of such systems. This substantiates the claim that many more hard of hearing persons would use technical equipment if provided.

In fact, there is much technological knowledge available today but it has yet to be put into widespread use. There is a gap in the application of the technology, some of it due to a lack of information and some of it due to uncertainty about the unknown and concern over costs. This must be changed so that there is a greater application of existing technology.

At the same time, a watchful eye has to be kept on technical changes, as experience has shown that these are not always beneficial for hard of hearing persons. Some of the technologies nullify previous benefits for hard of hearing persons. This was the case when new telephone receivers were introduced which reduced the magnetic leakage required for T-switch hearing aid use. It was only through legal representation to the Canadian Radio Television and Telecommunications Commission (CRTC) that the principle of T-switch use of telephones was upheld. In this case, as in other situations involving technology, hard of hearing consumers worked together with experts in the field to ensure that the principle of hearing access was upheld.

More recently, the issue of environmental interference with use of hearing aids on a T-switch has surfaced although it is not a new problem. It is just that now it is receiving more attention as the impact of the problem is better understood. I have personally encountered this problem for a number of years; I've been in rooms where it has been impossible to use an FM system because of interference from the mechanical room a floor below. When using the telephone on my T-switch I've

had to try to hear a conversation over the radio station inadvertently being picked up. Needless to say, it is frustrating when hard of hearing persons use technology which is intended to improve their acoustic environment, only to find it cancelled out by some other factor. Unfortunately, the solutions are very specific to a situation. What this means is that more engineers, architects and other professionals in related fields need to be aware of the problems and of ways to resolve it.

Fortunately, not all acoustic improvements are complicated. Carpeting, acoustical ceiling tiles and upholstered seating are a few of the ways to improve the acoustical environment. An acoustically-friendly room can reduce the need for other technical equipment. On the other hand, a room with poor sound quality may require extensive use of an assistive listening device. The preference obviously is to reduce the extent of use of external systems. One of the additional benefits of good acoustics is that persons without a hearing loss can benefit from it as well. As this fact becomes appreciated, undoubtedly more attention will be paid to acoustics and hard of hearing persons will benefit from the improvements. Yet, we are still far behind in good acoustics being recognized as a priority issue.

To conclude, I want to re-emphasize that the environmental issues which hard of hearing persons face are considerable. There have been technological advances and some increased knowledge of such advances. The challenge is to translate technological solutions into everyday action and to ensure that new advances do not reduce hearing access. To ensure this, hard of hearing persons and professionals need to work together, to share more knowledge, and to find cost-effective, qualitative solutions.

---

Warick, Ruth. Youth Survey results, for the Canadian Hard of Hearing Association. 1994.

Dahl, Marilyn. Report on a Study of the Comparative and Cooperative Roles of Canadian Deaf and Hard of Hearing Forum, Canadian Association of the Deaf, Canadian Hard of Hearing Association. March, 1993.