

# What Helen Keller Knew: Psychosocial Challenges that Arise as a Result of Unresolved Hearing Impairment

By

Max Stanley Chartrand, Ph.D. (Behavioral Medicine)  
DigiCare® Hearing Research & Rehabilitation

Helen Keller, that great deaf and blind lady, upon being asked whether she considers vision or hearing more important, replied:

*The problems of deafness are deeper and more complex, if not more important, than those of blindness. Deafness is a much worse misfortune. For it means the loss of the most vital stimulus--the sound of the voice that brings language, sets thoughts astir and keeps us in the intellectual company of man.*<sup>1,2</sup>

What Helen knew, and what popular thought has often overlooked, is that the human sense of hearing represents the primary cognitive window into life itself. “Blindness cuts us off from *things*; deafness cuts us off from *people*...to be cut off from hearing [people] is to be isolated indeed.”<sup>3</sup>

Indeed, to one who hears normally, it may seem a strange concept that one can stand amidst a room full of fellow beings—engaged in excited conversation, bonding and enjoying each other’s company—and yet feel awkward and terribly alone.

Years after Helen Keller’s exposé on the psychosocial effects of hearing impairment, audiology researcher Ramsdell (1968) published his thesis that the most pronounced effects of hearing loss were emotional and psychological. Out of his groundbreaking work came several models of human behavior relative to the human sense of hearing. One of those, used by this author in a later expansion, involved *The Three Psycho-emotional Levels of Hearing*<sup>4-5</sup>:

- **Primitive (Background) Level:** This level involves the auditory background of life, much of it indiscernible, but nevertheless crucial for one’s sense of security in a noisy world. A newborn baby recognizes, but does not understand, the voice of its mother. But that’s alright: he/she knows that they are home, cared for, and safe in familiar and loving surroundings. Other background noise might be the radio or television playing in the background as we read a book or soft music playing while visiting over the dinner table. It might be the never-ending drone of traffic from a nearby freeway, or the cheerful chirping of birds, a hurried stream, the ebb and flow of waves on the beach or wind in the trees above...or all of this together. Any and all of these sounds, as part of our natural or everyday environment, form the ambient backdrop of life and living. Remove these at once, and the feeling can be that of despair, emptiness, insecurity. Changing their proportion---most background sounds are in the low frequency domain, the area where most hearing impaired individuals maintain near-normal function—to the rest of life’s signals, communication, and background sounds can give rise to an invited *signal level of hearing* (described below), bringing constant disruption and emotional disturbance to the unfortunate listener.<sup>6-7</sup>
- **Signal (Alerting) Level:** Both learned and acquired, we are all born with innate knowledge of what to approach and what to avoid. Like the newborn kitten that immediately rears up and hisses upon encountering the friendly family dog, many signals and our perceptions of them are stored in the amygdala of the brain. Our first exposure to fire, thunder, lightning, crashing waves, the ferocious growl of nature, all represent warning signals that have been learned and stored up in the human subconscious over hundreds of generations. No learning is required to provide emotional responses to these signals. Almost from birth, however, we acquire a whole new nomenclature of warning and alerting signals: The ring of the telephone, the doorbell, the sirens of emergency vehicles, the waking signal of alarm clocks, timers on microwaves, to name but a few. Whether sound asleep, engaged in excited conversation, or wide awake, with normal auditory ability, no one needs to draw our attention or interpret these signals for us. They garner involuntary attention to the point of distraction until responded to.<sup>8</sup>
- **Symbolic (Communication) Level:** This level of human hearing is most associated with language and verbal communication. So important is this level of perception to one’s psychosocial well-being that an average 5 year-old child—with no formal training and little or no ability to read—already demonstrates a working vocabulary of up to 5,000 words! A high school graduate’s working

vocabulary zooms to 80,000 words, while the average doctoral learner must demonstrate vocabularies of 250,000 words or more! Words, or rather the symbols that comprise them, help us organize patterns of thought, express emotions, and gain and exchange knowledge. Words help us relate and bond with our fellow beings. Many studies over the years have demonstrated a strong correlation between vocabulary size and social, emotional, vocational, and financial development. In fact, the heart of societal and language development depend mightily upon the development of verbal and written vocabulary! However, it is in the interchange—both giving and receiving—that symbolic communication provides us with these benefits.<sup>9</sup>

Keeping in mind the three levels of human hearing, then, we need to understand what transpires—in terms of human relationships, educational/vocational progress, and, most of all, psycho-emotional well-being—when one's sense of hearing diminishes over time. First, we find that there is a role reversal between the primitive and signal levels of hearing as hearing loss advances. As the background of life becomes distorted or not clear enough for interpretation at the subconscious level, background noise rises into the signal level, where sounds become alarming and distracting. This would mean that everyday sounds—traffic, multiple speakers, machinery, etc.—can no longer be shuffled into the background of one's subconscious, but now is thrust rudely into the foreground of one's attention. Most common in this development are losses where the high frequencies plummet, leaving only the more background laden low frequencies audible. Of course, this would be highly dependent upon the degree of loss and the period of time over which it progresses. The worse the high frequencies, for example, the more prominent become background sounds and the more aversive they become to one's emotional well-being.<sup>5</sup> Some hearing impaired individuals even claim that background noises have become louder, when in fact all that has happened is that non-background sounds (the critical high frequencies needed for speech communication) have become softer!

In cases of rapid decline of hearing, sufferers sense a profound loss not unlike losing a close loved one. Such losses can evoke the same emotions of mourning—denial, despair, frustration, anger, and finally acceptance—that transpire when they actually lose a loved one, but often without recognizing the source of such feelings. Reports of sudden hearing loss repeatedly present an almost crippling form of emotional and psychosocial debilitation.<sup>10</sup>

It has often been said that normal hearing individuals should experience a simulated hearing loss (wearing totally occluding earplugs, for instance) to understand what hearing impaired individuals are going through. But of course, this experience is more aligned to cases of sudden deafness of say, equivalent to moderate to moderately severe *conductive* hearing loss. Losses that occur over, say, 20-30 years bring feelings of loss, but more subtly, with depression, anxiety, and a loss of self-confidence being the most common responses. Offsetting the emotional impact also is that those with gradually progressing losses have time to compensate for their hearing loss by using visual cues, focusing harder on the speaker, and turning up stress levels in an effort to fill in the blanks. But the effects are just as sure and profound just the same.

If the background or primitive level of hearing rises to the signal level, where does the signal level go? Since signal levels may become distorted, softer, and possibly not even heard, their usefulness in the scheme of personal security becomes less defined. That is why it can be unsafe to function in the hustle and bustle of life with poor hearing. Assistive devices—flashing lights instead of sounds, tactile (vibration) signals, and amplified signals become so critical for safe function of hearing impaired individuals.

Important to one's social-emotional well-being, and within the context of healthy human relationships, is the preservation of the symbolic level of hearing; verbal communication. The "voice that brings language, sets thoughts astir, keeps us in the intellectual company of man", as so ably stated by Helen Keller, adds up to the ability to function and advance unfettered within society. It means bonding in relationships—friendships, romance, marriage, family, intimacy, interaction and cooperation, giving and receiving encouragement, developing empathy for others' plights. These are the markers of social and emotional homeostasis. It also means advancement in education and vocation, and innumerable life pursuits.

The loss of the symbolic (speech communication) level of hearing, on the other hand, also means the loss of what this author calls "intimate communication". The loss of intimate communication means the loss of encouragement, hearing "*I love you*" in tones that demonstrate felicity, and the nuances of speech that signal empathy or sympathy. As uncorrected hearing loss approaches the severe stage of loss, not only do the softened tones that express empathy and sensitivity disappear for the impaired individual, they begin to disappear from their own voice, as well.

Indeed, one whose mode of verbal interchange is of raised voices, repetition, and pained facial expressions is one who feels estranged and isolated from the larger society. They become invisible in social circles, fail to advance in vocational tasks requiring coaching and supervision of others, and usually a life of loneliness. Imagine standing in a crowded room, everyone engaged in fluid conversation, and

feeling all alone. Adding denial to advancing hearing loss, and we find additional psychological manifestations in many, far too many, sufferers of unmitigated hearing loss.<sup>5</sup>

- Anxiety/panic behaviors
- Mild, moderate, and severe depression
- Defensiveness
- Frustration, impatience
- Resentment, anger
- Self-centeredness
- Social Paranoia
- Obsessive behavior
- Social aloofness or isolation

Of course, the degree of each manifestation will depend upon other variables, such as personality type, degree of impairment, ability to cope, and, especially the sensitivity and understanding of one's immediate social network. Too often, though, since hearing loss is invisible, those in one's social network may be at a complete loss of how to understand what the impaired person is experiencing. They may be too distracted by outward manifestations—anxieties, displays of depression and negativism, anger masked in sarcasm, and/or self-centered behaviors—that they fail to recognize the underlying cause, which is actually the loss of the above-described levels of hearing.

As a result, relationship difficulties arise many times more in the lives of hearing impaired individuals than for those with normal or corrected hearing. Divorce rates are higher, as well as estrangement from children and friends. Social dysfunction too often leads to higher rates of alcoholism and substance abuse and dependency, including much higher rates of overutilization of psychotropic drugs, and medical services.<sup>11-13</sup>

In almost every other human challenge one would expect the sufferer to know and recognize their sensory deficiency. But the truth is that deficiencies in the hearing and communicative domains are difficult to detect for what they are. Instead, life can become a treadmill of embarrassments, feelings of inadequacy, misunderstandings, rationalizations, and blame-games, until deeper psychosocial barriers prevent the sufferer from seeking help. Those in the hearing professions find it a rare instance for hearing impaired individuals to happen into their offices on their own. For that reason, it usually requires loving encouragement from loved ones for the impaired individual to take the first and final steps toward auditory rehabilitation. For much more is at stake than merely amplifying missed sounds.<sup>5</sup>

For that reason, hearing rehabilitation will usually not begin nor can it be completed until at least someone in the sufferer's social network are involved in the process of bringing the loved one fully back into the hearing world.

### **The Auditory Rehabilitative Pathway**

One of the problems of modern society is the expectation that everything can be fixed quickly. Change the broken part and, presto, the problem is solved. Take an Aspirin and the pain stops. Put on a new pair of glasses and fuzzy green balls turn to crystal clear leaves. Not so with hearing loss and its correction.

The road to normality is longer and more arduous than just about any other handicap, requiring most sufferers perhaps 60-90 days to overcome a condition of forgotten speech sounds called *phonemic regression*, and another 6-9 months or more to mend suffering (or changed) social relationships, and regain one's bearings on personal ambitions in education, vocation, and personal interests. Probably the most insidious losses, in terms of elusive rehabilitative pathways, are those that are predominantly high frequency.<sup>14-15</sup> Yet, these comprise the largest number of uncorrected cases.

Below, we will step through the stages of auditory rehabilitation, keeping in mind that each hearing loss will be unique as the individuals involved. For that reason, each program must be custom tailored by a caring, knowledgeable hearing professional. It is important to keep in mind that those with severe to profound losses may likely be referred for a cochlear implant evaluation. But even in such cases, a hearing aid trial to demonstrate best aided condition will nearly always be required. The following sequence represents a typical hearing aid exam, delivery, and aftercare for those of whom hearing instruments are required:

1. **Pre-Counseling**- Before the hearing evaluation, one should do a little homework in the waiting room. It is wise to spend waiting room time to learn about hearing loss and available options. Hearing health professionals often view their waiting rooms as educational experiences for waiting patients, and tend to equip them as such. In addition, there will be questionnaires asking about the life quality effects of one's loss, their health history, and past experience at receiving hearing services, if any. An excellent review of hearing loss can be found at <http://www.digicare.org/abouthearing.asp>. Information about the societal importance for seeking help for hearing problems can be found at <http://www.digicare.org/Depression.asp>.

2. **Hearing Evaluation-** A hearing evaluation is actually a journey of discovery. It begins with a thorough exploration of how one's hearing has diminished and brought effects upon one's life. This is called the Case History and is not to be fluffed over. During this crucial time, a caring health professional, the patient, and a loving third party lay out on the table how their lives have been affected by diminished hearing, as well as their hopes and aspirations for the future. Next, usually come the video otoscopy examination and a determination of whether there might be medically correctable issues, which warrant medical referral. If so, a recommendation is made. If not, the exploration continues with a thorough battery of audiometric tests, each task crucial in measuring where and how much loss is evidenced in each ear.
3. **Amplification Recommendation-** Often a demonstration of various technologies and applications are rendered at this point. It is imperative that solutions are explored within the resources of the patient, and yet be able to meet their individual needs optimally. Today, digital hearing instruments come with more options and styles than ever before. Discreet hearing is attainable in the vast majority of cases without advertising it to everyone. Even so, the most important benefits are to be found in digital solutions that help one hear better in noise, understand speech more clearly, and enjoy spatial function in varying listening environments. These three domains (function in noise, speech information, and spatial ability) help one regain self-confidence and feel more connected to their environment and the people around them. It is at this point that decisions are made for the most appropriate type of amplification solution to be ordered and impressions are made of the ears.
4. **Preparing for Delivery-** In preparation for this special day, our clinic asks new patients to use a gentle, botanical solution in their ear canals daily to help restore the often missing or deficient layer of keratin in the ear canals. Keratin is the important layer of tissue that often gets removed when one uses Q-tips, harsh solutions such as hydrogen peroxide, or that which is often evidenced by underlying disease and/or most prescription medications. Keratin is needed to shield the neuroreflexes of the external auditory canal so that ears can adapt quickly and successfully to wearing hearing aids. More about this important factor can be found at [http://www.hearingreview.com/issues/articles/2006-03\\_14.asp](http://www.hearingreview.com/issues/articles/2006-03_14.asp).<sup>16</sup> The time during the wait for the new hearing aids is a time of happy anticipation, a time to come to grips with hearing loss and a solid rationale for taking positive action to conquer it.
5. **Delivery and Training-** Just as important as the evaluation itself is the time and effort invested in receiving delivery of one's new hearing instruments. During delivery of instrumentation, a comprehensive checklist of key tasks is followed to assure that the patient is capable of inserting, adjusting, removing, and maintaining their new instruments. A wearing schedule is presented that allows for *gradual* wearing adaptation. Often, the schedule will suggest one hour in, one hour out throughout the first day; two hours in, one hour out the second day; three hours in, one hour out the third day, etc., until one's physiology has accepted the prosthesis without discomfort during all-day wear. In addition, it is imperative that important others in the patient's life be involved in the rehabilitative process. For family members often comprise the core of one's support group. Healing of emotional and psychosocial issues require the understanding and loving support of those closest to the patient. In truth, loved ones also heal in the process.
6. **Post-Fitting Counseling-** This is where the heavy lifting of auditory rehab takes place. In true Auditory Rehabilitation (AR) hearing instruments serve as the core of the program, but certainly not the end-all for many cases. Cases of moderate, severe, and especially profound loss will require a combination of coping strategies (speech reading skills, communication repair, and/or cued speech), assistive devices (flashing alarm clock, amplified telephones, door flashers, etc.), and a keen understanding in the utilization of one's rights under the Americans with Disabilities Act (ADA) and associated legislation. One's hearing professional will be able to provide guidance in each area of appropriate and needed assistance to achieve *communicative wholeness*. In each post-fitting visit, one must notify their professional of challenges encountered between visits until each have been addressed. This step of the process may require several visits over the ensuing weeks.
7. **3-month & 6-month Follow-Up Visits-** In many cases, it is wise to have a check-up at 3-6 month intervals to document quality of life improvements and to assure all bases have been covered. The goal is *optimal outcomes within one's resources* and within the capabilities and resources of the attending professional. Often, reprogramming of digital instrumentation is needed to "fine tune" to changes in the neurological system.
8. **Annual Re-evaluation-** It is advisable that an annual check-up of audiometric status be performed and documented in one's file on an annual basis. Then, as hearing thresholds change (and they will in most cases) or individual needs evolve, both patient and professional can assure optimal long-term benefits from AR. Every few years, a complete change of instrumentation is often required.

Coming back to the wisdom and insight of Helen Keller, in her advancing years she concluded in a letter to a friend that "after a lifetime in silence and darkness to be deaf is a greater affliction than to be blind...Hearing is the soul of knowledge and information of a high order. To be cut off from hearing is to be isolated indeed."<sup>1</sup>

The foregoing has been written to present an honest, realistic appraisal of the emotional and psychosocial challenges that beset a huge swath of the general public. The fact that hearing loss has often been called an "invisible handicap" illustrates why so many, young and old, men and women, and many in between, fail to recognize its impact on their lives.

Recently, a gentleman who described himself as a "retired professional" came in for a hearing test at one of our offices. He presented with a terrible loss, one of the worst precipitous cases I had seen in awhile. Though he admitted to having "a little bit of trouble hearing", his unaided monosyllabic speech discrimination score in quiet was a devastating 32%, and his articulation index (AI) stood at 24%. For years his wife, children, and numerous colleagues have been begging him to do something about his hearing loss.

His wife complained that she cannot stay in the same room with him when he watches television or listens to the radio. The kids and their families don't come around any more because he heads for the workshop or stays glued to the TV set. As in many such cases, he gave pretty rough treatment to the hearing health professional during the case history as she struggled to bring out into the light of day how his loss was really affecting his quality of life and the lives of those around him.

When asked if he realized how his uncorrected loss is making life difficult for his wife, he reared his head back and wondered aloud how his hearing ability could possibly affect his wife's happiness and well-being. "After all," he said, "I'm the one who has to live with it." To that the attending professional offered, "Sir, I'm afraid that is *not* the case. Your family lives with it every waking hour and would like nothing more than to have their father and husband back."

Tears welled up in his eyes, he looked at his wife, and said, "Dear, I never really thought about how my hearing was making your life miserable. I always thought it was just me, but now I see that if no other reason, I need to do this for you."

"No, dear, let's do this for *us*", came her tearful reply.



**About the author:** Dr. Chartrand is himself profoundly deaf and utilizes a cochlear implant and assistive devices for communication. He serves as adjunct professor of behavioral medicine at Northcentral University and as Managing Director for DigiCare Hearing Research & Rehabilitation, and is a widely recognized author, educator, and researcher in communicative and cognitive disorders. Contact: [chartrandmax@aol.com](mailto:chartrandmax@aol.com).

#### References

1. Love, J.K. (1933). *Helen Keller in Scotland: A personal record written by herself*. London: Methuen & Company, 68.
2. Grant, B. (1987). *The quiet ear: Deafness in literature, an anthology*. London: Andre Deutsch, 36-37.
3. Christie, J. (1987). Helen Keller, in *Gallaudet encyclopedia of deaf people and deafness*, New York: McGraw-Hill, volume 2, 125.
4. Ramsdell, D.A. (1968). The Psychology of the Hard-of-Hearing and Deafened Adult, in *Hearing & Deafness*, 4<sup>th</sup> edition, eds., Davis & Silverman, ch. 19.
5. Chartrand, M.S. (1999). *Hearing Instrument Counseling: Practical Applications for Counseling the Hearing Impaired*, 2<sup>nd</sup> edition. Livonia, MI: International Institute for Hearing Instruments Studies, 11-47.
6. Ross, M. (1996). My "Near Deaf" Experience. Retrieved on October 28, 2007, from [http://www.hearingresearch.org/Dr.Ross/my\\_near\\_deaf.htm](http://www.hearingresearch.org/Dr.Ross/my_near_deaf.htm).
7. Cybertherapy (2007). *Sound in VR*. Retrieved on October 28, 2007, from <http://www.cybertherapy.info/pages/sound.htm>.
8. Moore, B.C. & Alcantara, J.I. (2001, August). The use of psychosocial tuning curves to explore dead regions in the cochlea. *Ear & Hearing*, 22(4): 268-278.
9. Hodges, A. V., Balkany, T.J. (2002). Cochlear implants for sensorineural hearing loss. Retrieved on October 29, 2007, from [http://www.turner-white.com/pdf/hp\\_oct02\\_cochlear.pdf](http://www.turner-white.com/pdf/hp_oct02_cochlear.pdf).
10. Bowlby, J. (1969). *Attachment and Loss, Vol. I*. New York: Basic Books.
11. Morton, N.E. (1991, September). Genetic Epidemiology of Hearing Impairment. *Annals of the New York Academy of Sciences*, 630(1): 16-31.
12. Whitehouse, A., Sherman, R.E., and Kozlowski, K. (1991, March). The needs of deaf substance abusers in Illinois. *American Journal of Alcohol and Drug Abuse*.
13. Steinberg, R. (1991). Issues in providing mental health services to hearing-impaired persons. *Hospital Community Psychiatry*, 42: 380-389.
14. Chartrand, M.S. (2003). Sleep Deprivation and Auditory Rehabilitation: A Patient Primer. DigiCare Hearing Research & Rehabilitation. Retrieved on October 22, 2007, from <http://www.digicare.org/Sleep-Deprivation.asp>.
15. Qian-Jie F., Galvin, J., Wang, X., and Nogaki, G. (2004). Effects of auditory training on adult cochlear implant patients: A preliminary report. Retrieved on October 28, 2007, from <http://www.cochlearamericas.com/PDFs/GoodScienceSB.pdf>.
16. Chartrand, M.S., & Chartrand, G.A. (2006, March). Resolving a root cause of failure to fit. Hearing Instruments, retrieved on 12/1/07 from [http://www.hearingreview.com/issues/articles/2006-03\\_14.asp](http://www.hearingreview.com/issues/articles/2006-03_14.asp).