

## Hearing Ear, Hearing I

Mike Chorost

### INTRODUCTION

Which is more important in hearing: the *ear* or the *I*? Both, of course are important. There has to be an *ear* that hears, and there must also be a mind, an *I*, that listens and interprets. In this article I am going to talk about the way my *I* has gotten better and better at hearing as time goes on. It's very helpful that it does, because I can't upgrade the hardware of my ears very often. (In fact, I have not upgraded them since 1988, when I replaced my Siemens hearing aids with Oticon.) Half-jokingly, I call these improvements in hearing "software" upgrades, as if my brain was a computer that could readily be programmed.

I was in the wrong place at the wrong time during the rubella epidemic of 1964, and so was born with a severe-to-profound hearing loss. My left ear presently has a loss of roughly 70 dB HL, my right 95. I was fit with my first hearing aids at about 4 years of age. Now, at 33, I figure I've spent approximately 170,000 hr wearing hearing aids. I've been counseled by at least seven audiologists, and have tried out new hearing aids perhaps 15 or 20 times. Of that number, I've worn four: Radioear in the 1960s, Widex in the 70s, Siemens in the 80s, and Oticon in the 90s. Thus I have some up-close-and-personal knowledge of how audiologists, hearing aids, and broken ears behave.

In the last 10 yr, there has been a broad-based movement toward patients viewing doctors as experienced counselors instead of as remote, infallible authorities. The explosive growth in holistic and alternative medicine, self-help groups, and preventive care, points to a cultural desire among both patients and doctors to think of health holistically and collaboratively. My argument simply extends these lines of thought into audiology.

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**THESIS:**  
**THE MIND OUTWEIGHS THE EAR AND THE AID**

In this section I will relate those moments of clarity and insight I have had in my life, which have yielded improvements in my hearing as dramatic as any from upgrading the technology I use.

Over the years I have gotten better and better at understanding the people around me, despite the fact that my hearing has measurably declined. I find this outcome astonishing, as if a car, despite an aging engine, ran races faster as time went on. In such a case, one would suspect that the driver had gotten increasingly savvy about coaxing every last ounce of performance out of the hardware. Long experience, improved judgment, and a vast accumulation of tiny details (oversteer to the left to avoid fishtailing; shift just so to get into fourth gear) could account for the increased performance. To put it another way, improving software (skills, techniques, rules of thumb) can compensate, and often more than compensate, for inadequate hardware.

This argument has particular importance given that the body is often extremely hard to upgrade. Every audiologist knows that clients often reject demonstrably better hearing aid fittings. Furthermore, new hearing aids are breathtakingly expensive, and out of the reach of many clients. But just as old computers can be revitalized by relatively low-tech software upgrades, so can the hearing of human beings be revitalized by a deeper, more holistic attention to their minds and psyches.

Here are three accounts of learning experiences I've had. I call them "software upgrades" of the mind.

**Account 1: Telephones**

This occurred when I was perhaps 14 or 15. I was wearing hearing aids that didn't give me enough gain to hear ordinary telephones. The family phone had a volume control, and I acquired a slip-on phone amplifier for use away from home, and between the two of these I had a fairly normal "telephone life." Then I tried a new hearing aid, which had quite a bit more gain. I didn't like it at all, but it had one very nice side effect: I discovered that I could use ordinary phones with it. It was liberating not to have to go home or carry around a hockey-puck sized amplifier to make phone calls. Now one might think a teenager would go through hearing aid hell in order to have that kind of freedom, but to me it wasn't worth it: I wanted my old hearing world back. So I returned to my old hearing aids. At some point I confronted an ordinary telephone and, without even thinking about it, picked it up and made a perfectly ordinary phone call.

What had changed? Not hardware: my ears and hearing aids had not changed. What had changed was *software*. As much as I had disliked the new aids, they had taught me how to recognize a softer dial tone, how to hold an ordinary handset without inducing feedback, and how to pick up voices coming from inside the

handset instead of booming out of it. I had also learned the particular distortion characteristics of ordinary handsets, as opposed to those of amplified ones. All of those skills were active and ready to go the first time I picked up a phone with my old hearing aids; they had become, in a sense, hardware-independent.

It was a defining moment for me, and I'm still working out its implications a decade and a half later. The inaudible had become audible, not because I had better hearing aids, but a better mind.

### **Account 2: Volume**

This account is so simple that I'm embarrassed to admit how old I was when it happened. I must have just started graduate school, in 1988. I discovered that if I turned my hearing aids *down* at parties, I heard better. Often, in fact, better than the people I was talking with, because I could do some speechreading.

Until then I had had a "punk rock" model of volume versus utility: the louder, the better. But at parties, lower volumes reduced background noise more than they reduced the voices of those closest to me; the ratio of signal to noise improved.

The discovery made me realize that I could choose the *best* volume for a given situation, instead of simply the loudest. Now when I enter a new situation, I often stop for a moment to try out different volumes, seeking the best one, "tuning" myself. And so I can move in social environments more effectively, hearing better and with less stress.

### **Account 3: Group Therapy**

Group conversations are among the most difficult situations for any hearing-impaired person. The diversity of voices, coming from a diversity of directions and distances, are extremely challenging to resolve. I had often "solved" this problem by using an FM listening system, where I would ask people to hold it and pass it to one another. This solution had significant costs, however. It slowed down the conversation and fundamentally changed its character, by forcing people to accommodate themselves to me. It undoubtedly – I wince to think this – made people uncomfortable and perhaps even resentful. I was aware of this, to a greater or lesser extent, but I felt that I didn't have a choice: it was that or not hear.

I go to a weekly group therapy session for graduate students at my university. I do this because I'm well aware that I have much to learn about interacting with people, and group therapy is a proactive way of exploring my interpersonal style and getting feedback on what works and what doesn't. Naturally, I brought my FM device, and requested that the group use it. My six or seven fellow group members passed it around dutifully, though with what feelings – resentment? acceptance? enthusiasm? – it's hard to say.

One day, the unit's batteries died. I packed it away and resigned myself to a

session in which I wouldn't hear very much. But, to my astonishment, I heard everyone quite well. It was astonishing for two reasons: first, any hearing-impaired person learns to assess what situations will "work" for him or her and which won't, and second, on the few occasions the batteries had died before, I had indeed been unable to hear. Something important had changed. But what?

In Account 1, I spoke of a change in skills. Here, a more profound change had happened, not so much in skills as in my orientation toward other human beings. I must necessarily get personal in order to explain this. I do this not in the spirit of a tell-all confessional, but because the story only has value if it's told accurately and in detail.

When I started group therapy, I believed that my problems were unique: that only I of all graduate students felt isolated and had difficulty starting friendships and relationships. Or, to put it more accurately, that I suffered more than other people who had such problems. I would think, "You're saying the same things as I am, but I suffer more than you do, and my situation is more intractable than yours." And when one thinks so, one's hearing does not *reach* very far – in my case, 4 or 5 ft, perhaps. But I slowly came to understand that I was not unique, that I was more like my fellow group members than unlike them. I became more able to enter into genuine connection with other people in the group, to listen and speak with empathy and understanding. The focus of my consciousness moved out of myself into a point physically located somewhere between the other person and myself. The FM device had hid this progress from me, because it allowed me *not* to extend my consciousness into that space between the other person and myself. But when the batteries failed that day and I was forced to fend for myself, the difference became dramatically evident: my range had doubled or tripled, to 10 or 15 ft.

It was astounding. Spurred by this discovery, I tried not using the FM device in the undergraduate class I teach. I found that I could now (often) understand students on the other side of the room, something that I had not believed I could do. Now that I was less self-conscious, I could be more conscious of other people, and the improvement in my hearing was tangible and dramatic. Because of this, I have become convinced that one of the most important prerequisites for good hearing is the paradoxical ability to concentrate and relax at the same time. This is not so much a single, learnable skill as it is a total stance involving the body, mind, and emotions of the whole human being.

## DISCUSSION

Of course, audiologists know about the interaction of body and mind in daily practice. "That old Mr. Grump, he's so set in his ways, he'll never adjust to a new hearing aid." But I wonder whether these insights have yielded productive changes in standard practice. (I focus on standard practice, the practice taught to legions of graduate students, not that of exceptional audiologists.) From my per-

spective as a lifelong client, I have not seen that audiologists as a rule consider the mind more important than the body, nor training and counseling more important than diagnosing and fitting.

For example, I could benefit from concrete suggestions on *how* to adjust to a new hearing aid. The audiologist's assurance that the aid is better is directly contradicted by my visceral experience: the world sounds alien, jarring, even frightening. I need concrete and workable counsel, a course of daily action and useful feedback, at that moment more than at any other. But the sum total of the advice is usually, "Give it time, keep an open mind, you'll adjust." If blind people were issued guide dogs this way, the dogs would be at the pound in a week.

What suggestions there are, are not supported by an infrastructure for regulating and sustaining them: recordings, computer programs, workbooks, tools. Even more importantly, they may not be supported by a theory of learning. How do people learn to live in bodies that have changed? What triggers insight and adaptation?

A theory of learning is far beyond the scope of this paper, but let me offer two specific observations about my own learning, described in the three accounts above.

1. In each case, my "aha!" insights were triggered by an accident – an anomaly, an unexpected difference: often a failure of technology. Each time, I moved to a higher level of functioning by making better use of existing information, not by having better information.
2. The insights were preconditioned by months or years of prior experience. I wore an unsatisfactory hearing aid for a month or thereabouts; I went to many parties over time; I spent years in group therapy using my FM device. The process leading up to insight was hidden while it was happening. Indeed, it *didn't* happen until I reinterpreted the past to "discover" that it had happened.

On this limited basis, I would guess that learning consists at least partly of long experience, followed by accidental and striking anomalies. Audiologists could explain to their clients that they must be patient, to allow for the slow accretion of detail and experience; that they must seek out varied environments, to allow for rich detail and experience; and that they must be alert to difference and anomaly, for that is where insights may crystallize, to reveal landscapes that had formed slowly in darkness. This, in a nutshell, is what "try it out – you'll adjust" actually *means*.

### RECOMMENDATIONS

One might think, from my description, that learning is a matter of accident and epiphany. As such, it would be unteachable except by indirection, and audiolo-

gists would end up sounding like New Age gurus, to the confusion of their practically-minded clients. But epiphany can be catalyzed and accelerated, by training and tools.

What might such training and tools be? I offer a number of suggestions:

- Keeping a workbook-based diary to track day-to-day discoveries and impressions.
- Querying friends and family in a guided, focused way for feedback.
- Computer programs with a variety of simulated listening environments, with answer keys.
- Speech-recognition programs, based perhaps on recent technology such as DragonDictate or ViaVoice, to track changes in speech (speech quality being directly related to hearing).
- Computer-controlled hearing aids designed to slowly “morph” from an old setting to a new one in weeks or months.
- Web-based client-monitoring programs, which let clients enter data for routine, automated scrutiny by an audiologist.
- A Y-shaped double elbow letting users wear two hearing aids at once, switching back and forth for easy comparison. (Think how difficult it would be to decide, in an ophthalmologist’s office, whether lens A or B was better if it took 60 or 90 s to switch between them.)
- And, perhaps most importantly, an emphasis on training, psychology, and theories of learning in graduate school.

On a deeper level, audiological counsel may need to encompass the whole individual, body and psyche together. I offered Account 3 as evidence that becoming a better person also made me *hear* better. I suggest that a person whose psychic energies are directed inward will, where all else is equal, hear worse than a person whose are directed outward.<sup>1</sup> A person who is not at ease with herself and the world simply will not achieve her full hearing potential.

David Wright, whose autobiography on deafness is magnificently insightful, speaks of the importance of state of mind:

Not long ago I met Dr. Pierre Gorman, a deaf-born Australian with a Cambridge doctorate, at a meeting of audiologists at Edinburgh University. Dr. Gorman astonished me by sitting through the entire meeting (it lasted all day) and following the various speakers apparently without effort . . . . When I made some ad-

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<sup>1</sup>This may actually be a testable hypothesis. My Myers-Briggs personality profile is INTJ – Introverted, iNtuitive, Thinking, Judging. INTJs are known for being highly self-willed and self-contained, with strong senses of boundary between themselves and others. (For a detailed description of INTJs, go to <http://sunsite.unc.edu/pub/academic/psychology/alt.psychology.personality/profiles/intj>.) A researcher could investigate whether certain profiles hear better than others, all else equal.

miring remark about this feat, Dr. Gorman seemed surprised.

“You ought to be able to do the same. Relaxation is the key.”

Dr. Gorman, I am sure, is right. When in any state of tension, nervousness or over-anxiety, I have the greatest difficulty in following anybody, including my nearest and dearest. On the other hand a drink is a great help to lipreading, obviously because alcohol reduces tension. This is not an illusion, for when well away I have performed prodigies in this field that are beyond me in normal circumstances.<sup>2</sup> (Wright, 1969/1990, p. 110)

A person who is “at ease” can achieve the ideal stance for the best possible hearing. That stance consists of being focused and relaxed at the same time, concentrating neither inward nor outward psychically, but at a balance in between. Mihalyi Csikmenthalyi has famously called this state “flow.” It is not a mystically achieved state, but one that can be reached by guidance and training. I have gotten there myself on rare occasions, without any particular training. David Wright jocularly prescribes hard drink; it seems unlikely that audiologists would do the same. But there are other ways.

It may make perfect sense, then, for audiologists to refer their clients to psychotherapists or other mental health specialists as part of a total treatment plan. In the future, perhaps the dividing line between audiology and psychology will blur, and students will be required to take courses in both disciplines. Perhaps new specialties will emerge, where some audiologists focus on diagnosis and fitting, and others on training and rehabilitation. Yet others may consider themselves principally psychologists, specializing in people with hearing disorders.

I can see audiologists objecting, “But we can’t be psychologists, too; we have too much to learn already as it is.” Or, “Trying to learn some of both would only leave us good at neither.” Perhaps the solution is to reconfigure rather than expand disciplinary boundaries: for example, the profession could be divided into “otoaudiologists” and “psychoaudiologists.” In any case, I would agree that the MA needs to be phased out in favor of a doctoral-level “AuD” degree; the MA is simply no longer enough.

There are, of course, practical obstacles to realizing a more holistic, humane, and humanizing version of audiology: heavy caseloads, cutbacks, inertia, financial limits. I don’t wish to minimize them, but I also feel optimistic that they can be overcome. The prize is worth the race. I look forward to an audiology that is not only smart but also wise, whose clients become not just better hearers but also better human beings.

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<sup>2</sup>David Wright’s *Deafness* (Faber & Faber, 1969/1990) is difficult to find in bookstores. However, it is still in print, and may easily be ordered from [www.amazon.com](http://www.amazon.com).

Warm thanks go to Chuck Berlin for genuine wisdom in audiological practice, and most of all, to my mother and father – my first and best audiologists and psychologists.

#### REFERENCES

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