WHAT DEAFNESS REVEALED TO ME

by Gerrit van der Mey*

In the following I report two great experiences that have been very opportune to me in my position of one who is totally deaf.

In consequence of these experiences a reconsideration is necessary of what is known as the sense of vibration in man which is, in reality, a form of primitive hearing or 'eo-hearing'.

As I possess neither medical nor other professional knowledge of the subjects under discussion, the reader will perhaps be able to lay his finger on minor mistakes and imperfections. I do hope and trust, however, to have hit upon the truth.

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ON 'EO-HEARING'

At the age of thirty-one I lost my sense of hearing as a result of meningitis. Quite unexpectedly, I became completely deaf overnight. The window of my room had been left open because, until then, I thought I merely had a bad cold. In spite of a fever, which by that time had risen considerably, I knew on waking up in the morning, that a new day had already broken although I could not hear anything at all. The unnatural and therefore uncanny silence made me produce experimental noises myself. However, these appeared to me so weak and dull that I could only admit I was absolutely deaf.

Quite amazingly, I nevertheless experienced my own voice as something so well-known and familiar that I did believe I somehow 'heard' it. I did not then realize I might have 'felt' it. On the contrary, the following thought entered my head: "If I can somehow hear my voice, I cannot be absolutely deaf; every time I am speaking myself I can still hear." This leading thought was present already before it was discovered what exactly had happened to me and it enabled me to feel free and relaxed since while speaking.

Some weeks later I had to be admitted to hospital where I remained until shortly before the end of the war. At that time quite often allied airforces performed food-droppings over Amsterdam. When these took place for the first time people leant out of the windows everywhere, also in my room. Then for the first time again I was confronted with the heavy roar of the engines of the low-flying aircraft. Who can imagine my surprise and delight when I discovered that I experienced this noise as a truly acoustic sensation! Again it was given to me to feel slightly less 'deaf'. Nevertheless both my ears had become useless.

The sense of vibration permits us to experience strong and not too high-pitched sounds in many parts of the human body. As is well-known this sense enables deaf people to recognize, for instance the rhythm of a march.

The ear and the sense of vibration both serve the sensation of sound. In a person with normal hearing sound is perceived simultaneously by the ear and by the sense of vibration. As sensory instruments the ears are so superior to the sense of vibration that a person with normal hearing forgets early in life to pay attention to the functioning of his sense of vibration. Nevertheless the latter sense has a far greater influence on the total sensation of sound than one normally realizes. In my opinion the mere fact that I think I can still 'hear' my own voice as well as heavy sounds although I am totally deaf, can mean only one thing: before my deafness my sense of vibration must have cooperated with my ears so closely that, for me, the psychical effect of sound was the result of the total sensation of sound via the ears and via the sense of vibration. It stands to reason that I do not deny the greater importance of the ears. Still I maintain that in the past the sense of vibration has always added faithfully and unobtrusively to my acoustic sensations. I realized so only after I became totally deaf and used this new knowledge to my advantage.

I have reason to believe that that which held for me when my hearing was still normal also holds for all people with normal hearing. I therefore propose to call the sense of vibration our primitive sense of hearing or eo-hearing from now on.

SOME FACTS AND THOUGHTS PERTAINING TO EO-HEARING

Once upon a time, when I could still hear, I wanted to buy

a gramophone record. As there were many customers I had ample time to observe other people who were selecting records. I heard one customer comment: "No, this kind of music is not monumental". What that might mean became clear to me very soon afterwards. The shopkeeper hurried off and returned with a record with still more percussion and rumbling basses. The reaction was: "No, this still is not yet exactly what I have in mind". The shopkeeper came up with different records, among others of Wagner and Mahler; the noise increased until the chalk almost fell off the walls. Then the customer was satisfied at last. Apparently the man was vibration-crazy: he got into the habit of increasingly stimulating his eo-hearing, taking the overloading of his ears for granted. Similar conditions prevail to-day in popmusic.

If it were possible to eliminate the eo-hearing of a normally hearing person he certainly would not find loud music as impressive as before.

When I put my hand on the back of a woman while she is speaking it seems to me she 'buzzes' like a man. This does not please me. Unfortunately only the lower frequencies of her voice are able to excite the eo-hearing in my hand.

Somebody listening to a soundrecording of his own voice is disappointed at the quality of his voice. He is hearing his voice only via his ears because the level of the loudspeaker is too low to excite his eo-hearing. Like many deaf people I often speak when nobody is listening. The deaf speaker who hears his own voice no longer feels isolated.

Darwin's evolutionary theory states, among other things, that the development of the animal kingdom has taken place in small steps. Primitive animals like worms already possess

eo-hearing (= sense of vibration). At a far higher stage of development a refinement of hearing is achieved by the appearance of ears at the appropriate locations on the body. In the course of evolution eo-hearing becomes less and less important but keeps on playing a role in hearing. The researcher who does not want to consider the sense of vibration as our eo-hearing has to regard worms etc. as stone deaf creatures. In his way of thinking hearing suddenly appears as a complete novelty the moment the development of the ears starts. This would not be in agreement at all with the notion of evolution in small steps.

The problem of my rehabilitation may be formulated as follows: After I became completely deaf I was compelled to learn, to make do, in my relation to the outer world, with a 'pars pro toto', namely with eo-hearing instead of eo-hearing plus hearing by ear.

THE MACHINERY OF SPEAKING

We get an idea of the complexity of the speech mechanism as soon as we sum up the many speech sounds a speaker has to deal with. In my opinion, the sounds of our mother tongue are somehow listed in our memory. Upon hearing a speech sound man unconsciously matches it with an item on his own list; he may even recognize words, i.e. combinations of speech sounds. On the other hand man is able to select and pronounce any item on his list and, if wanted, to combine the items to form words.

A deaf speaker cannot possibly compare his speech with that of other people. He lacks the possibility of a continuous speech control. Therefore we may expect that prolonged deafness may easily lead to speech deterioration as a result of

a gradual disorganization of the machinery of speaking.

Fortunately, once the list of speech sounds has been fixed in our memory it remains quite stable so that, after we learned how to speak in our youth, our speech machinery may keep on functioning without extra supervision worth mentioning. In the following the reader will find a table in favour of the foregoing views. For the first time since I became totally deaf thirty-two years ago I have tried to sum up the German speech sounds still registered somehow in my brain. I have not got the slightest idea of how such a list might be represented in my brain. However, I am perfectly able to recall and pronounce any item on my list. Also, I am able to replace, in a given word, any speech sound with any other speech sound as long as the result remains pronounceable (see the given examples below).

One should not regard my case as a favourable exception: it certainly is representative. More than 40 years ago, as a pupil of the Marburger Deutschen Blindenstudienanstalt (High School for the Blind), I only received rather low marks for German, English, French and Latin. I showed no special talent for languages. Though I did not speak them, dialects somehow fascinated me. I also liked to compare German and English with my Dutch native tongue. At the University I only studied mathematics, leaving languages alone.

Guided by experience I assume that, after total loss of hearing, our speech mechanism remains in function provided it is undamaged and we were able to speak proficiently before we became deaf. Nobody knows exactly the mode of action of the process of speaking and how man succeeds in handling correctly his organs of speech. We all well know that we must not feel nervous while speaking. It follows therefore, that after becoming deaf we must try first and foremost to remain free and unconcerned while

speaking. If we succeed in this respect we may hope to retain our original ability to speak. Similarly, a rope-walker will not fall down as long as he fully exploits his own abilities, confidently and unhesitatingly.

It is a known fact that highly excited people easily lose control over their voices. He who weeps speaks clumsily; he who is angry speaks too high or too loud or cannot utter a word at all, or one may speak in a husky voice. Again a disappointed speaker sounds dull and monotonous.

Deaf people like us cannot in such moments of excitement hear how badly and unpleasantly we sound. This is an encumbrance to a speedy return to our normal way of talking. Therefore we must always try to prevent or fight down quickly emotions and bad moods. This is not always simple, particularly in the beginning of our deafness when we have not yet adapted ourselves to our new circumstances.

(For key to German speech sounds turn to the next page)

KEY TO GERMAN SPEECH SOUNDS

I have indicated each speech sound by one to three letters of a keyword that is taken for granted.

Vowels and diphthongs:

Sound		Keyword	Sound		Keyword
1	A	AST	2	A	war
3	E	eng	4	E	habe
5	E	wen	6	E	wer
7	I	in	8	I	dir
9	O	Rock	10	O	so
11	O	Tor	12	Ö	Köln
13	Ö	Öl	14	Ö	Gehör
15	U	Nusz	16	U	Fusz
17	Ü	Nüsse	18	Ü	Füsze
19	Au	aus			
20	Ei	Eis	21	Eu	Beute

Consonants:

22	B	bei	23	P	Post
24	D	da	25	T	Tag
26	G	gut	27	K	Kind
28	H	Hut	29	J	ja
30	L	Laut	31	L	faul
32	M	mit	33	M	im
34	N	nie	35	N	an
36	Ng	eng	37	R	nur
38	Ch	ach	39	Ch	ich
40	F	frei = V vor	41	W	wo
42	S	aus	43	S	so
44	Sch	Schaf			

Notes: The letters Q, X, Y and Z have not been used by me in the table; the Z in "zu" should be represented by the sounds Nos 25 and 42.

Most letters have no unambiguous pronunciation, see the pronunciations Nos 9 to 11 of the letter O.

On the other hand, most speech sounds have no uniform spelling, see the spelling of sound No 6 in "Meer, mehr, wäre, während" and that of sound No 8 in "ihr, wie, Vieh".

A consistent phonetic alphabet would offer deaf people the advantage that each character refers to one and only one speech sound, and vice versa. Each character in a phonetically written text would always trigger off the same speech sound when read aloud, a utopian feature too good to be true!

Why not use the letter K in words like "Axt, quer, Wachs"? They would simply read as "Akst, kwer, Waks".

And why does one write "Acker" in stead of "Akker"?

POSSIBLE APPLICATIONS OF THE TABLE

1. In "Dank" the N represents sound No 36. Sound No 35 may also be pronounced in this word but less easily. In "Spatz" and "Star" the S represents sound No 44. In the Northern German dialect sound No 42 is used in this position.
2. In Southern German dialects quite often sound No 18 is replaced by sound No 8.
3. The Dutch pronunciation of the word "Licht" may be achieved by replacing the sounds Nos 8 and 39 with the sounds Nos 7 and 38.
4. In the dialect of Amsterdam the vowel in the Dutch word "heer" (=gentleman) is realized as sound No 5 instead of the accepted pronunciation incorporating sound No 6.

GOOD SPEECH

Just like everybody, deaf people, myself included, want to be able to express themselves orally. In case of failure to do so inner stress may be expected.

Young deaf children face the immense task of learning their mother tongue for the first time in a school for the deaf. It goes without saying that also their teachers are greatly taxed.

Among deaf people those who learned to speak, read and write before they became deaf and whose organs of speech are in good working order, can count themselves lucky. Unfortunately, even among this catagory there are many people whose deafness negatively affects their speech. In order to give people losing their hearing when they already know how to speak the best of chances to maintain this ability, strategic measures have to be considered. Next rehabilitatory measures for people going deaf and finally measures for voice training, in the above order. Voice training and nothing but voice training makes deaf people unnecessarily dependent on logopedic follow-up and with less success.

1. GENERAL STRATEGIC MEASURES

Having a deafness acquired later on in life, I can only remember with gratitude the almost forgotten teachers who taught me to spell in my youth. In primary school, there is a tendency nowadays to teach children to read via visual recognition of whole words. It is in the interest of children whose fate is deafness, however, not to drop completely the method of spelling. Experts should consider how to imprint on the memory of young children the relation between letters and speech sounds in an easy, quick, and

stimulating way.

In addition, minor spelling-reforms may be welcome, the more so if, at the same time, they prove to lighten the painstaking work in the schools for the deaf.

Whenever spelling-reforms are envisaged the advantages of a consistent phonographic spelling to deaf people should be borne in mind.

Foreign words should either be pronounced according to the rules of the mother tongue or be replaced by equivalents in the native language. It should be allowed to tamper slightly with the intonation of the loanwords.

Entertainers could cooperate by occasionally working puns in their performances. In that way they induce their audience to play consciously with the smallest units of speech.

The foregoing partly radical proposals are primarily beneficial only to the relatively small group of the completely deaf. However, also the far larger group of people with normal hearing in daily contact with deaf people is interested.

2. REHABILITATION

My deafness caught me so unawares that no panics resulted. Therefore I succeeded in discovering my eo-hearing right from the start and allotted it a rightful place in my consciousness.

Suppose I had indeed panicked, somebody else should have checked me and drawn my attention to my eo-hearing.

If a slowly progressing deafness is diagnosed in an early

phase, the patient can, at least for the time being, be prepared for his future deafness in normal conversations. In that case he will realize from the start that he will not lose his hearing completely and that the much dreaded 'realm of silence' must be regarded as a fairy tale.

The better the patient succeeds in preparing himself for his new circumstances in the primary phase of his deafness, the more independently and perfectly he will exploit his speaking abilities later on.

3. VOICE CONTROL

Like everybody, the deaf wish to entertain regular social contacts with their fellow men. Social contacts, however, cannot be forced or organized; their establishment depends on the willingness of both parties involved but also on the ability to speak in an acceptable way.

For everybody any conversation is just another example of speech training. For deaf people like ourselves an additional factor is that friends with normal hearing every now and then make tactful allusions to our way of speaking: they explain to us the correct pronunciation of a new vogue word or they draw our attention to the fact that we talk a little bit too loud or too soft. Sometimes, my wife catches me in the act of pronouncing a word in the dialect of my childhood. Also it has happened, during lively altercations, that I actually snarled at her though this was not my intention at all. Of course strangers hear these things when they are present by chance. However, they are unwilling or they simply don't trouble to correct the way the deaf person involved talks. Simply for the purpose of correcting our speech our friends are extremely worthwhile to us.

Our very problem, however, is that friendly relations with people in our neighbourhood build up relatively slowly or are even nipped in the bud. Our relatively slow reactions and, on the side of the other party, want of time or impatience are to blame but also a needlessly defective way of speaking takes its toll.

Our way of talking depends on our temper and is favourably influenced by a balanced and cheerful mind. If possible, violent emotions should be avoided.

A healthy way of living does not only prevent all sorts of bodily ailments but also the resultant loss of good humour that is so detrimental to our way of speaking.

The deaf are engaged in conversations less frequently than people with normal hearing. This easily results in 'verbal malnutrition'. Simply therefore animal-loving deaf people should keep a pet. As a human being one is as it were automatically inclined to address one's pet in a way expressing joy, affection, and surprise vocally. In the case of a deaf-blind person the pet should be, if possible, a guide-dog. Dogs force us to articulate well because they do not react to monotonous speech. One may take healthy walks. On simple and dangerfree roads my dog walks beside me in full freedom and plays with other dogs on our way. He immediately returns, however, as soon as I call him. Also, pets provide us with subjects for stimulating talks with other animal-lovers.

Finally, the following problem. Should the deaf-blind when we write something in their hands, speak aloud or not while reading? I always speak aloud myself because:

- I can at least 'hear' my own voice (by eo-hearing) instead of that of my partner in conversation
- my partner always knows what he has already written in my hand

- other people, participating in our conversation hear, via my voice, the 'speech' of my partner.

I readily admit, however, that this reading aloud has a disturbing effect in a lecture hall in the case my partner merely tells me what a speaker says at that moment. Even soft speech is disturbing to people sitting next to us. In that case I ought to be very quiet but the force of habit is very strong.

I have tried to show that the world of the deaf deviates less from that of a person with normal hearing than we might expect on superficial scrutiny. All people possess eo-hearing, that is the oldest component of the total sense of hearing. Even deaf children who never heard their mother's voice experience everything that has to do with vibration in first instance acoustically. Even so vibration may cause itching in the finger tips of anybody.

Eo-hearing, a gift of nature neglected by man, has made me less vulnerable to deafness.

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