Open Ears

By R. Murray Schafer

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We have no ear lids. We are condemned to listen. But this does not mean our ears are always open. "The violent and the righteous are hard of hearing," said Günter Grass.[1] In every society it is possible to detect individuals or classes of people whose ears are open and those whose ears are closed. Open to change? Open to obey? Open to criticism? Open to new ideas? Open to messages from God? Or closed to them.

So far as I know, no historian has actually ever listened to history, that is, distinguished between good listeners and bad listeners, in an attempt to deduce what was happening or about to happen as a result of the clairaudience of some and the deafness of others. This is not to imply that listeners have always had an upper hand over non-listeners. Often the situation is reversed, as it seems to be at the present time, when we are increasingly ruled by the deaf. The three questions to ask are these:

1. Who's listening?
2. What are they listening to?
3. What are they ignoring or refusing to listen to?

Countless dictators have fallen because they failed to detect the sounds of revolution soon enough. And probably an equal number have been hurled into power by bawling multitudes who couldn't even pronounce their names. The deaf can lead the deaf just as the blind can lead the blind.

But there are also real flash-points in history where something revolutionary was heard for the first time. Big noises like cannons, steam engines, jets and cell phones have changed history as much as royal proclamations. So have whispers at clandestine meetings. In every case someone is listening and others are not. What follows are a few examples of significant social changes attributable to sound events.

The Ear of God

The notion of God as a microphone, hearing or overhearing everything, is at least implicitly present in many religions. When I was a child going to church with my parents, I always felt awkward when the minister said, "Let us offer up a silent prayer to the Lord." Then all heads would bow and all eyes would close. The church was silent until the minister broke the stillness to inform us that God had heard our prayers. He was confident about that. God always heard the prayers of earthly sinners. It amazed me to think that at any moment millions of people all over the world were speaking to God, and that God could understand all the languages, unscramble all the confessions, and even decipher the silent thoughts of the praying multitudes. Of course, Christianity functioned, and still functions, on the supposition that nothing can be concealed from God in darkness or in silence.

But if the ears of God are always open, why do we have to signal when we want to make contact? Why the rattling of bones, the blowing of the ram's horn or the ringing of church bells to announce our readiness for communication? Certain tribal societies could explain this simply: the gods were often sleeping and needed to be awakened. I have shown how authoritative bells were in the convent of Bernardines of the Obedience of Martin Verga (1815) from a description given by Victor Hugo in *Les Miserables.*[2] Not only were prayers announced by bells, but all activities were directed by their ringing; and this was true wherever there were churches and monasteries.

Quebec City, 1857, Order of St. Augustine.

4 a.m. *Reveil.* Bell sounded for the duration of one "Pater and Ave."
4:30 a.m.Thirty tolls on the church bell.
5:15 a.m. *Les Petites Heures.* Bell sounded for the duration of one "Pater and Ave."
5:45 a.m. Mass, announced by thirty tolls on the church bell.
— Housekeeping, signalled on the monastery bell for the duration of two Ave Marias.
9 a.m. General lecture, signalled by the monastery bell and a hand bell for the duration of a De Profundis.
10:45 a.m. First announcement of the *Dîner des Pauvres* on the monastery bell for the duration of two Ave Marias.
11:00 a.m. Diner des Pauvres signalled by hand bell and monastery bell sounding for two Ave Marias, separated by a pause lasting one Sancta Maria.
11:15 a.m. Examination. Thirty strokes on the monastery bell.
11:30 a.m. *Diner des Religieuses* announced by hand bell and monastery bell sounding for two Ave Marias, separated by a pause lasting one Sancta Maria.
Noon Angelus. Three times three strokes leaving the duration of a Sancta Maria between each group.
1:25 p.m. *Chapelet.* Monastery bell and hand bell sounded for the duration of one De Profundis.
2:25. p.m. Catechism. Thirty tolls on the monastery bell.
2:45 p.m. *Lecture particulaire.* Announced by the monastery bell and hand bell for the duration of one De Profundis.
3:10 p.m. Vespers. Hand bell and church bell sounded for the duration of one De Profundis.
4:45 p.m. First announcement of the *Souper des Pauvres.* The monastery bell sounded or the duration of two Ave Marias.
5:00 p.m. *Souper des Pauvres.* Hand bell and monastery bell sounded for two Ave Marias, separated by one Sancta Maria.
5:30 p.m. *Matins.* Hand bell and church bell sounded for the duration of one Pater and one Ave.
6:00p.m. Supper for the monks announced on the monastery bell for the duration of two Ave Marias separated by a pause of one Sancta Maria.
6:30 p.m. Second refectory. The monastery bell sounded for two Ave Marias without pause.
7:45 p.m. *Examen.* Seven or eight strokes on the monastery bell, then thirty strokes on the church bell after having rung the hand bell.
8:45 p.m. Bedtime. The monastery bell is sounded for the duration of one De Profundis. [3]

In one sense all this bell tolling was intended for God's ears, since the durations were determined by prayers recited aloud or silently by the monks who tolled them. But the more obvious intention was to maintain the regimen of the monastery and, in

a broader sense, to regulate the behaviour of everyone living within Christian society. When the authority of Christianity weakened, church bells grew fewer. Perhaps God was no longer listening, or at least wasn't speaking. The many sounds once regarded as divine voices—the storms, the thunder, the mysterious voices of nature and of dreams—were rationalized differently. God became silent. With God's silence, human vocabulary changed. No more Pater Nosters or Ave Marias. Other ears opened to listen to the human predicament.

The Ear of the Tyrant

Dionysius of Syracuse (ca. 430—367 B.C.) was known as a brutal tyrant, though he made Syracuse a powerful city. His name, or rather his ear, survives eponymously in the famous S-shaped grotto that resembles the cochlea of a human ear in enormous proportions. The cave is about 210 feet long and over 70 feet high with a narrow, uniform channel a few feet wide at the top. The unique sound properties of the cave were studied by the acoustician Wallace Clement Sabine. "When being shown the grotto from below, one's attention is called to its very remarkable reverberation. When above, one's attention is called to the ability to hear what is said at any point on the ground. It is related that Tyrant Dionysius … so designed his prisons that at certain concealed points of observation he could not only see everything that was done, but through remarkable acoustic design, could hear every word that was spoken, even when whispered only."[4]

The Ear of Dionysiua is the prototype for all subsequent developments in acoustic surveillance by the state, passing through centuries of architectural curiosities intended to detect treachery through listening tubes (the seventeenth-century versions of which are preserved with faulty acoustics in the vivid illustrations of Athanasius Kircher's *Phonurgia Nova*)[5] down to the reality of hidden microphones and wire tapping in the twentieth century.

The ears of the state have never been more curious and open. Everyone has a voice print and somewhere everyone's voice print is on file. The setting of Solzhenitsyn's novel *First Circle* is a top secret laboratory, committed to research on voice scramblers, simulators and decoders.

"Eavesdropping, censorship, recording, and surveillance are weapons of power, " writes Jacques Attali. " The technology of listening in on, ordering, transmitting, and recording noise is at the heart of this apparatus … Who among us is free of the feeling that this process, taken to an extreme, is turning the modern State into a gigantic, monopolizing noise emitter, and at the same time, a generalized eavesdropping device." [6]

Not all of this listening is carried out in secret.[7] This is no longer necessary once mechanisms are created for society to express itself openly on every possible issue. Then all that's necessary is to monitor the radio phone-in shows and opinion polls to know where to release and where to apply pressure. Music is probably more informative. I refer, of course, to pop music, which is really the only kind permitted in the free world.[8] Listen closely to its tempo, its beat, its vocal machinations and song texts and it will tell you all you need to know about the mood of the people.

> … the music of a well-ruled state is peaceful and joyous and its government is orderly; that of a country in confusion is full of resentment and anger and its government is disordered; and that of a dying country is mournful and pensive and its people are in distress. [9]

Compare today's song literature with any collection of folk songs from the past—the ballads, the romances, the laments and the marches—and ask yourself, which kind of government is reflected in each style? History is a songbook for anyone who would listen to it. Songs for war, songs for peace, and a heteroclite of forms between them. Crooners giving way to marching bands and patriotic songs in times of war. Spirituals giving way to Afro drumming. The disappearance of Christian hymns. The emergence of Latin rhythms as Latin America bulges north. Pentatonic music as the Far East spreads everywhere. Rap music by bitter young men. New Age music for doodlers. Drug music for the smashed up. Techno music for flesh-machines. The world sings itself to death and back to life.

"Where you want to have slaves, there you should have as much music as possible," Tolstoy once said to Gorki. A society too drunk with music is incapable of other operational achievements, and the ruler who wishes to stay in power knows when to stimulate music and when to withhold it, as the Church did in the Middle Ages when they obliterated all secular music, or as Stalin did when he slapped Shostakovich and Prokofiev and strangled American jazz.

The Ear of the Confessor

Confessions rarely go unheard. There is always someone willing or required to listen to the confession of misdeeds, of apologies and repentance, someone to whom these confessions are of interest and value, perhaps to provide a catharsis for the sufferer, perhaps to scrutinize disorders that might upset the frictionless functioning of society.

The Latin word *audire* (to hear) has many derivations. One may have an "audience" with the king, that is, a chance to have him hear your petitions. One's financial affairs are "audited" by an accountant. Because originally accounts were read aloud for clarity.[10] An accused person is given a "hearing," that is, a chance for the accused and witnesses to offer aural testimony in the courtroom. Of course, rooms are often constructed or appointed to favour the transmission of some voices over others, and the courtroom, like the royal court, is no exception, with the judge as the king occupying the most elevated position, reminding us that the Latin word *obaudire* meant "hearing from below," i.e., obeying.[11] Similar relationships have been noticed in other languages, for instance in German, where *hören* (to hear) is also the root of *gehören* (to belong to) and *gehorchen* (to obey). We hear sound. We belong to sound. We obey sound.

In his *History of Sexuality* Michel Foucault has shown how the sexual freedom in both action and vocabulary that existed in Europe in the seventeenth century was gradually repressed during the eighteenth and nineteenth centuries. The task of introducing and maintaining this repression was assigned to the churches and schools, and the reason, he claimed, was because the pleasures of sex were incompatible with the work ethic. "At a time when labour capacity was being systematically exploited, how could this capacity be allowed to dissipate itself in pleasurable pursuits, except in those—reduced to a minimum—that enabled it to reproduce itself?"[12] And if sex is repressed, that is, condemned to prohibition, non-existence, and silence, then the mere fact that one is speaking about it has the appearance of a deliberate transgression." Sexual discussion needed to be controlled, and the channel through which this was accomplished was the confessional. It was in the confessional, not the bedroom or the brothel, where the discourse of sex most regularly took place, where the confessor's secret lusts and weaknesses achieved their most intensified expression, and where the whole subject was given its most vivid coloration of iniquity. To a modern "liberated" person it seems outrageous that a celibate monk should have been empowered to deal with all the confessions of our sexual desires and appetites—doubly outrageous in respect to recent disclosures

about the behaviour of some priests; but the point Foucault wishes us to realize is that despite all attempts to invalidate sex during the nineteenth century, all that really happened was that is was spoken about in a different context, that the ear open to our confessions was less frequently that of the beloved than of a third party, inquisitive, seemingly neutral, but at root intolerant.

Freud's revelations did much to dispel this, though the technique of enquiry remained remarkably similar. One of Freud's most celebrated patients, the Russian aristocrat known only by the pseudonym "Wolf-Man," tells us in his "Recollections of Sigmund Freud" how the "psychoanalytic situation" came about.

> This situation, as is well known, is that of the patient lying on the couch with the analyst sitting near the couch in a position where he cannot be seen by the analysand. Freud told me that he had originally sat at the opposite end of the couch, so that analyst and analysand could look at each other. One female patient, exploiting this situation, made all possible—or rather impossible—attempts to seduce him. To rule out anything similar, once and for all, Freud moved from his earlier position to the opposite end of the couch. [13]

The darkened room and invisible analyst perpetuate the confessional booth and the hidden priest, but the couch put the analysand in a more comfortable position to encourage free disclosure. It is well known that Freud spoke little during sessions with patients, but he listened intently, almost the way a music teacher listens to a pupil's performance; and like a music teacher, he saw his patients regularly, sometimes as frequently as every day. It is equally well known that Freud attached great significance to slips of the tongue (Freudian slips) and to other spontaneous and inadvertent sounds such as harsh breathing and the tapping of foot or fingers, sounds that he believed recalled the 'primal scene' of coitus between parents heard during infancy, and a frequent cause of later neuroses.[14] That spontaneous or uncontrollable sound-making had important implications and could be deciphered like a secret language was a revelation. It was as if the human being was signalling in one way through controlled grammatical speech and in another way in the accents and accidents that surrounded the conscious communication. And yet Freud, and later Jung, failed to realize the implications of the acoustics of the unconscious, both in dreams as well as in music.

Neither Freud nor Jung seem to have been particularly musical. There are a few references to music in Freud's letters but none in his theoretical writings. Nor are there in the writings of Jung. This made them particularly unsuited to deal with patients who had obsessions with sounds, musical or otherwise. A tune, for them could only be analysed through the words that accompanied it. I have elsewhere mentioned the unsatisfactory manner in which Jung dealt with the acoustic contents of his patients' dreams.[15] Freud once denied the auditory dimension of dreams altogether, "for, in dreams we see images but we hear nothing."[16] At other times he admitted that we may hear voices in dreams, which he quite dogmatically considered memories of conversations from the previous day. The only accommodation he made to sounds was to acknowledge that occasionally an external sound, overheard by a dreamer, might signal a chance in the dream—that church bells, for instance, might take the dream in a different direction.

The indifference of early psychiatrists to sounds in dreams is unusual, and rather sets them apart from other interpreters of psychic experience. Most of the big dreams of the Old Testament were aural or had important aural elements. Among the North-American Indians, the prophet's song comes out of a dream and is sung immediately on waking. Even in nineteenth-century Europe aural dreams seemed significant, as many of E.T.A. Hoffmann's *Tales* indicate.

> As I was in the realm of dreams a thousand fears and pains tormented me. It was night and I was terrified of the leering masks of the monsters who dragged me one moment into the abyss of the sea and the next raised me on high. Rays of light came through the night, and the rays of light were tones which surrounded me with their serene purity. I awoke from my pains and saw a great, clear eye which stared into an organ; and as it stared, tones arose and wound themselves into more shimmering and majestical chords than I had ever thought possible. Melodies poured up and down and I swam their current and wanted to drown. [17]

Vivid acoustic dreams recounted by Nietzsche, Thomas Mann and other German authors rather fly in the face of Freud's assertion that we dream deafly. Freud evidently did not benefit from Novalis's suggestion that medicine is a musical art, even though passages like the following were quite well known during Freud's day.

> Jede Krankheit ist ein musikalisches Problem—die Heilung eine musikalische Auflösung. Je kürzer und dennoch vollständiger die Auflösung—desto größer das musikalische Talent des Arztes.[18]

Novalis believed that the rhythms of the body move in harmonic order, and disease can be detected as a dissonance in the harmonic ordering. Paracelsus would have understood that, as would practitioners of holistic medicine today, but not the tone-deaf psychiatrist. In her study of Freud's listening habits, Edith Lecour makes the case that Freud was actually envious of the musical talents of others (for instance of Mahler, who briefly consulted him), talents he would gladly have developed had he possessed them. But, as I said at the beginning, history has been as dramatically shaped by closed or impaired ears as by open ears. Twentiet-century psychiatric practice has concentrated on the visual contents of dreams leaving the aural territory for others to explore.

The Ear Within

The ear of the dreamer, the ear of the shaman, the ear of the prophet and the ear of the schizophrenic have this in common: messages are heard, but no matter how clear or compelling they may be, there is no evidence of a verifiable external source. The transmission seems intracranial, from an interior sound source to an ear within the brain. Julian Jaynes, in his book *On the Origin of Consciousness in the Breakdown of the Bicameral Mind* (Boston, 1976), attempted to explain how we hear voices that are heard by no one but ourselves. Jaynes tried to demonstrate that while speech is normally a function of the left hemisphere, the right hemisphere may, at one time, also have had a speech-producing function, a freer, more hallucinatory activity of vocalizing that he called "the language of the gods,"—messages that were passed from the right hemisphere to the left by means of an "anterior commisure," to be heard as audible voices.

The whole of the *Iliad* is directed this way. Apollo speaks to Hector; Athene speaks to Achilles. As Jaynes explains it, "the Trojan War was directed by hallucinations." The formula "Yahweh said to Moses," repeated throughout Exodus and again in Leviticus, where the laws are dictated, might be interpreted this

way also, though some believers might prefer a god who shouts from on high to one who inhabits the head. What cannot be denied is that the voice of Yahweh was heard exclusively by Moses. " 'Speak to us yourself,' they said to Moses, 'and we will listen; but do not let God speak to us or we shall die,' " (Exodus 20:19) There is a parallel here with Zoroastrianism, where Srosh, "the genius of hearing," interprets the messages of Ahura Mazda for the faithful.

At some point (Jaynes dates it at about three thousand years ago) the commisure connecting the brain hemisphere was weakened, and the voices began to be stilled. Jaynes' theory has been criticized, though it has not been replaced by any more convincing explanation of why voices were heard with such astonishing force in ancient times, or that their presence has diminished today and is only found vividly among people society regards as mad. The steady development of consciousness and rational thought has transformed the inner voice into a symptom of psychic disorder. A person might ask: have they really disappeared or were they merely suppressed because they are too frightening or irrational for the modern mind? Even in the time of Joan of Arc one could be punished for the arrogance of claiming to her them. "During the trial, worn out with questions and scholastic subtleties, she is asked whether she still hears the voices. 'Take me to the woods,' she says, 'and I shall hear them clearly.' " [19]

Ear Muffs

Rationalism extinguished the rich treasury of imaginary voices that once existed in Europe and still exists in many less civilized parts of the world. The empirical Greeks often referred to sound in their writings. Pythagoras created a musical system based on harmonics derived from listening to the heavenly spheres in motion. Socrates took counsel from this "demon," an interior psychic voice that warned him about danger and evil. In his *Problemata*, Aristotle asked many questions about sounds and attempted to answer them. In *De Rerum Natura* (On the Nature of Things) the Latin poet-philosopher Lucretius has a vigorous discussion on vocal sound and acoustics in general. Early philosophy was dialogue and debate, but by the time we get to St. Augustine, philosophy was beginning to settle into a quieter mode, for, as he said, "It might be contended that, though we utter no sound, we nevertheless use words in thinking and therefore use speech within our minds."[20] Logic, ethics and aesthetics became silent, contemplative disciplines, and remained so for centuries until Schopenhauer proclaimed music and noise as indispensable ingredients of philosophical speculation, noise because it can "instantly shatter the power of thought," and music because the "combined, rational, numerical relations set the brain fibres themselves vibrating in a similar way." [21] Still, a reader of Western philosophy might conclude that everything worth serious discussion exists in a silent vacuum: war, revolution, all social enterprise, and even the universe. This repudiation of sound passed over into science as well where major theories (the space-time continuum, the atomic structure of matter, the wave-corpuscular theory of light) were construed as silent, as were the instruments used in their measurement (the telescope, the microscope, equations, graphs, statistics and numbers). It's almost as if the great achievements of Western philosophy and science were produced in a huge anechoic chamber. Myriads of books written in silent rooms and read in silent libraries. But has the world become quiet and peaceful for it?

A person suffering from acousmata is taken to a psychiatrist. A person found mumbling in a public place is considered dotty. But we all hear voices in the mind and may converse with them out loud when alone, just to fill the solitude. A musician may also hear musical sounds, and while unmusical people often express astonishment that a composer could hold the contents of a whole symphony in the head, playing it through at will while shaping and reshaping details, there is no doubt that this skill can be learned, and has been learned by countless musicians. A legend says that Mozart wrote the overture to *Don Giovanni* only hours before the premiére. In reality, he had accumulated it in his mind throughout the writing of the opera and needed only a few hours to write it down.[22]

The Ear of the Imagination

Everyone has the power to imagine sounds; and fairy tales, literature and radio once developed this skill in ways that television cannot. Try this experiment. Imagine the following sounds. Take time to let each resonate in the mind before cross-fading to the next.

… a baby laughing …
… a woman weeping …
… a bowling alley …
… Niagara Falls …
… a fish jumping out of water …
… an iceberg slowly melting …
… a giraffe with hiccups …

The technique of imagining sounds was developed with great subtlety by the Japanese haiku poets. Basho's celebrated poem about the frog is a good example.

Furuika ya An old pond
Kawazu tobikomu frog leaps in
Mizu no oto With a splash.

It could be translated more vividly with three words:

Frog
Pond
Splash

The diminutive sound of birds inhabiting vast spaces was a favourite of the haiku poets.

Hark! The voice of a pheasant
Has swallowed up the wide field
At a gulp.
— Yamei

The voice of a cuckoo
Dropped to the lake
Where is lay floating
On the surface.
— Basho

The movement of sound was another specialty.

The sound of an acorn
Falling down a shingled roof.
Cold of the night.
— Gyôtai

Cricket!
Although it was next door you sang
I heard you here.
— Issa

One of the fundamental paradoxes of the listening experience is revealed in this poem. Is sound where it originates or where it is detected? Is it in the soundscape or is it in the ear? The reply "both" is not satisfactory because we do not hear sound in two places, but in only one. Issa recognizes this and opts for the subjective sensation of sound in the ear as more authentic.

Detail of Ear Mandala by Sonja Ruebsaat

At times an aural phenomenon may merge synaesthetically with the visual.

The sea darkens
And a wild duck's call
Is faintly white
— Basho

The Japanese also cultivated the suspense of waiting for sound to happen.

The butterfly rests on the temple bell, asleep.

Of course, the Japanese were not alone in hearing vibrating worlds beyond the visual appearances. A striking example by a Western writer comes from August Strindberg, who heard a cricket singing in his pillow. "Now assuming that these creatures once sang in a field of flax, do you not believe that Nature or the creator could use the vegetable fibre [of linen] as a phonograph, so that it plays to my inner ear which through suffering, deprivation and prayer has become willing to hear further than before?" [23]

Attending to the immanence of sound in silent objects is stimulated by meditation, especially the unfocussed meditation of Zen Buddhism. The composer Toru Takemitsu explains the difference between the oriental and the occidental listener this way: "The bells of Westminster Abbey speak in terms of first person singular: they have an individual motive with a distinctive statement. The Japanese temple gong, however, speaks without personal identification: its sound seems to melt into the world beyond persons, static and sensual." [24] Sound objects in the oriental landscape encourage peripheral listening, while sounds in the West compete for focused attention—can this be true?

Most of the sounds busy people listen to are signals for activity. This explains their immunity to the sounds of nature. One of the essential differences between the natural environment and the engineered environments in which most people now live is that nature can't be shut off with a button. Things that can't be generated or shut off with buttons or switches attract little attention in the modern world.

The failure in our time to protect the natural habitats of birds and animals is largely due to the fact that we no longer hear nature or can put names to its voices. If you can't name the birds, if you don't know how to recognize the leaves of the trees by the sounds they make, or hear a cataract down the river, or recognize when a winter wind is bringing in a storm, nature is anesthetized, and its survival will depend on forces other than human.

The power of technology really comes down to a fascination with buttons and switches in an attempt to modulate information intake. As the twentieth century progressed there were fewer off switches; Society became media-massaged and constantly alert for instructions on where to go or what to do next.

The cellular phone, which the Germans appropriately called the "Handy," is the latest installment in this drama. Answer when your master calls. Life without secrets, without privacy, without freedom. The latest shackle for the technological prisoner to carry about.

In the 1790s Jeremy Bentham designed his "panopticon," a circular prison with cells in tiers facing a central rotunda where guards were able to observe all moves of the isolated prisoners twenty-four hours a day. At the time it was considered outrageous; but isn't this what today's tyrants want to achieve: a transparency of the population in which nothing remains secret? The Ear of Dionysius is the constant dream of anyone seeking power in the world. And accordingly we find that power seekers are never very far from media technology.

But no one can hear everything—unless God can. Beyond what fascinates your ear today is something else, though you can't or don't hear it yet—but whoever hears it first has a good chance of inheriting the future.

R. Murray Schafer is Canada's pre-eminent composer and is known throughout the world. In an era of specialization, he has shown himself to be a true renaissance man. His diversity of interests is reflected by the enormous range and depth of such works as *Loving* (1965), *Lustro* (1972), *Music for Wilderness Lake* (1979), *Flute Concerto* (1984), and the *World Soundscape Project*, as well as his 12-part *Patria* music theatre cycle. His most important book, *The Tuning of the World* (1977), documents the findings of his World Soundscape Project, which united the social, scientific and artistic aspects of sound and introduced the concept of acoustic ecology. His other major books include *E.T.A. Hoffmann and Music* (1975), *Ezra Pound and his Music* (1977), *On Canadian Music* (1984), *Voices of Tyranny: Temples of Silence* (1993), and *The Thinking Ear: On Music Education* (1986). Schafer's books and music can be ordered on line from: <http://www.patria.org/arcana/>

Footnotes:

1.*From the Diary of a Snail*, New York, 1973, p. 26

2.See: *Voices of Tyranny: Temples of Silence* (Arcana Editions: 1993). pp. 52-57

3.Source; "Sonnerie. Odre des Observances," *Reglements des Religieuses hospitalières de la Misericorde de Jesus, de l'ordre de St. Augustine.* Manuscript in the Archives *du Monastère de l'Hôtel-Dieu de Québec.*

4. Wallace Clement Sabine, *Collected Papers on Acoustics* (New York, 1964), pp. 274-75.

5. Athanasius Kircher, *Phonurgia Nova,* facsimile of the 1673 Kempten Edition (New York, 1966).

6. Jacques Attali, *Noise* (Minneapolis, 1985).

7. A remarkable example of this is recorded by Milan Kundera in *The Unbearable Lightness of Being*: during the communist era, Prague police evidently broadcast tapes from bugged apartments over the state radio as a public incrimination of the inhabitants.

8.Any other kind of music might be, and on occasion has been, considered conspiratorial.

9. *Book of Rites (Li Chi or Li Ki)*, section 19, in *Sources of Chinese Tradition,* compiled by William Theodore de Bary et al., (New York, 1960), p. 184.

10. cf. Walter J. Ong, *Orality and Literacy* (New York, 1982), p. 119.

11. Victor Hugo once said, "Kings have ears only in their feet," meaning that one had to grovel before royalty in order to be heard.

12.Foucault Reader, edited by Paul Rabinow (New York, 1984), p. 294.

13. *The Wolf-Man,* edited by Muriel Gardiner (New York, 1971), p. 142.

14. The best study of Freud's listening habits is: Edith Lecourt's, *Freud et la sonore: le tic-tac du desir* (Paris, 1992)

15. "Ursound," in Voices of Tyranny: *Temples of Silence* (Indian River, 1993), pp. 22-24.

16. *Aus den Anfängen der Psychoanalyse*, 1897-1902 (London, 1950), p. 175.

17."Ritter Gluck" in R. Murray Schafer, E.T.A. *Hoffmann and Music* (Toronto, 1975), p. 35.

18. "Every disease is a musical problem—the healing a musical solution. The shorter and more successful the solution—the greater the musical talent of the doctor." *Novalis: Auswahl und Einleitung* (Frankfurt/M—Hamburg, 1956), p. 184

19. Ernest Renan, "The Poetry of the Celtic Races."

20. St. Augusine, "On the Teacher," in *Medieval Philosophy*, ed. Herman Shapiro (New York, 1964), p.6.

21. Arthur Schopenhauer, *The World as Will and Representation* (New York, 1966), vol. 2, ch. 3.

22. Closer to home, Glenn Gould spent fewer hours practicing than most pianists, but he spent many hours studying scores and silently memorizing them.

23. *August Strindberg,* Olof Lagercrantz, New York, 1984, p.276.

24. Toru Takemitsu, Confronting Silence (Berkeley, California, 1995), pp.10-11.