

**ICSV14**  
Cairns • Australia  
9-12 July, 2007



## **OBSERVATION OF PURE FREQUENCIES IN BIORESONANCE VOCAL SOUNDS**

Anna Bacchia<sup>1</sup>, Giovanna Fiore<sup>1</sup>, Melisa Rossi<sup>1</sup>

<sup>1</sup> Anna Bacchia Vocal Sound Laboratory,  
via Al Bosco 75, Aldesago, 6974 Lugano, Switzerland  
[bacchiastudio@vocalsound.org](mailto:bacchiastudio@vocalsound.org)

### **Abstract**

Relaying on present knowledge of bio-resonance and bioenergetics, the correlations between the frequencies of human voice and the energetic equilibrium of human body are becoming more manifest. Based on our previous researches it has been shown that bio-resonance treatments imply significative variations on the human organism energetic equilibrium.

In this context an experimental research on what we have called *pure frequencies*, observed under particular conditions during applications of bio-resonance vocal sounds, is presented. The aim of this work is to expose how the human voice performing the bio-resonance can undergo a peculiar phenomenon which shows a frequency spectrum different from an ordinary one.

Considering the complexity of variables involved in the experiment, this work also points out the need of new interpreting models not restricted to the common cause-effect *forma mentis* which characterizes the scientific method approach. The spread of quantum physics interpretations into other disciplines like medicine and psychology is becoming a fertile soil for the creation of such new models.

### **1. INTRODUCTION**

Starting from the development of the relativity theory and in the context of modern physics, the concept of mass and energy are considered more and more specifically as different aspects of a unique essential nature which manifests itself as particle or electromagnetic wave depending on the observation conditions.

Based on bio-resonance principles, quantum medicine and Vedic psychology elements on the nature of Sound, the Anna Bacchia Vocal Sound Laboratory has carried out experimental researches and collected data regarding first the energetic re-equilibrium which happens as a human response to the Vocal Sound and second the peculiar frequency spectrum that the Vocal Sound emitting voice can show.

The experiences here described are oriented to underline the complexity of dynamic interactions which occur between variations of the intensity of the partial frequencies in the emitting voice and the bio-energetic response of the human body.

In particular the aim of the present research is to show how the frequency spectrum of

the emitting voice acting the bio-resonance treatment can transform and differ from an ordinary one.

The complexity of the involved variables and also the ‘how’ these researches were conducted suggest an opening to new points of view for them to be observed, demanding to be placed in a new vision, in new interpreting models which should go beyond the pure linear thinking.

Data were collected by means of the most recent devices for recording and analyzing bio-energetic variables.

*‘How’ and ‘on which level of consciousness’ these experiences were conducted are fundamental elements of the presented experimental work.*

## 2. GENERAL OBSERVATIONS

The Anna Bacchia Vocal Sound Laboratory research is based on years of experiences, teaching and exploration of Voice, of its genesis and potentialities.

The Vocal Sound process has been explored in the context of Communication and Relationships, in the Expressive and Artistic field, experimenting and observing:

- the Vocal Quality;
- the relation between the Vocal Sound and Emotions, Memories, Archetypes;
- observations focused on Vocal Sound Genesis and Nature.

In this context, the research work was not only oriented on the observation of the Voice signal in terms of pure pressure wave and used for communication purposes, but also dwelling upon those Creative, Human, Vital and Bio-resonance aspects regarding the Vocal Sound, which makes the Vocal Sound a Unique Process with extraordinary Potentialities.

Moreover the vision and the knowledge of some Vocal Sound potentialities coming from the most influential human cultural traditions find affinities with some elements and points of view of quantum physics regarding undulatory aspects and bio-resonance phenomena.

The scientific foundations of this work are linked to quantum physics principles which look at the subatomic reality based on the particle-wave duality. In this way the concepts of particle and wave offer themselves as two aspects of a unique physics reality. In this context the effects of bio-resonance phenomena involve the matter, seen as an ensemble of elementary particles, as well as the undulatory nature of sound, and in particular the Vocal Sound.

## 3. THE RESEARCH

### 3.1 Bio-energetic re-equilibrium

Initially the research has been concentrated on collecting data regarding the bio-energetic re-equilibrium of the human body provided by the bio-resonance Vocal Sound. Further observations on this specific exploration can be found in the previous publications presented by this Laboratory in [1], [2], [3].

Some aspects of human response to the Vocal Sound involve:

- emotional, mental, cultural elements;
- elements of memories and archetypes;
- physiological-functional aspects in bio-energetic terms which constitute the core

of the present search.

The bio-resonance responses manifest themselves through the re-equilibrium of human body bio-energetic variables and were studied focusing on the intensity and the relation between partial frequencies of the Vocal Sound emitted during the bio-resonance treatment.

Those specific responses from several people which experimented the bio-resonance Vocal Sound were recorded into the acupuncture meridians by means of modern devices of bio-energetic diagnostic as illustrated in the following tables.

| HAND              | RIGHT   | LEFT    | FOOT                | RIGHT   | LEFT    |
|-------------------|---------|---------|---------------------|---------|---------|
| KMP TONSILS       | 56      | 56      | KMP PANCREAS/SPLEEN | 62      | 50      |
| * TEETH           | 52      | 51      | * LIVER             | 66 / 60 | 60 / 42 |
| * NASAL SINUSES   | 53      | 56      | * JOINTS            | 58      | 60 / 55 |
| * LUNGS           | 54      | 51      | * STOMACH           | 66 / 64 | 60      |
| * COLON           | 58 / 54 | 56      | * MESENCH. DEGEN.   | 72 / 70 | 65 / 60 |
| * NERVOUS SYS.    | 56 / 51 | 52      | * SKIN              | 68      | 63 / 62 |
| * BLOOD VESSELS   | 50 / 43 | 60      | * FATTY DEGEN.      | 60      | 58      |
| * ALLERGY         | 54      | 56 / 50 | * BILE DUCTS        | 68      | 70      |
| * DEGENERATION    | 54      | 54      | * KIDNEY            | 68      | 70      |
| * ENDOCRINE       | 57      | 56      | * BLADDER           | 56 / 52 | 60 / 50 |
| * HEART           | 53      | 65 / 60 |                     |         |         |
| * SMALL INTESTINE | 52      | 50      |                     |         |         |

Table 1. Values of a bio-energetic situation recorded with a Pitterling Electronic Dermatron device *before* the Vocal Sound treatment. In a 0-100 scale, the value 50 represents an optimal bio-energetic equilibrium (Electroacupuncture Test after Voll, Office of dr. Franco Bruni, 22 Marzo 2001, 9.12 pm).

| HAND              | RIGHT | LEFT | FOOT                | RIGHT | LEFT    |
|-------------------|-------|------|---------------------|-------|---------|
| KMP TONSILS       | 50    |      | KMP PANCREAS/SPLEEN | 52    |         |
| * TEETH           | 50    |      | * LIVER             | 52    | 50      |
| * NASAL SINUSES   | 51    |      | * JOINTS            | 52    | 52 / 49 |
| * LUNGS           | 50    |      | * STOMACH           | 51    |         |
| * COLON           | 49    |      | * MESENCH. DEGEN.   | 51    | 51      |
| * NERVOUS SYS.    | 53    |      | * SKIN              | 50    | 52      |
| * BLOOD VESSELS   | 50    |      | * FATTY DEGEN.      | 51    |         |
| * ALLERGY         | 50    | 50   | * BILE DUCTS        | 51    |         |
| * DEGENERATION    | 50    |      | * KIDNEY            | 50    |         |
| * ENDOCRINE       | 50    |      | * BLADDER           | 51    | 52      |
| * HEART           | 50    | 50   |                     |       |         |
| * SMALL INTESTINE | 50    |      |                     |       |         |

Table 2. Values of a bio-energetic situation recorded with a Pitterling Electronic Dermatron device *after* the Vocal Sound treatment. In a 0-100 scale, the value 50 represents an optimal bio-energetic equilibrium (Electroacupuncture Test after Voll, Office of dr. Franco Bruni, 22 Marzo 2001, 9.52 pm).

The comparison of values recorded before (Table 1) and after (Table 2) the bio-resonance treatment shows an evident bio-energetic re-equilibrium provided by the bio-resonance Vocal Sound.

### 3.2 Anna Bacchia Vocal Sound Laboratory Method for the Bio-resonance Re-equilibrium

The bio-resonance re-equilibrium proposed by the Anna Bacchia Vocal Sound Laboratory explores the following qualities.

#### 3.2.1 Quality of listening

In the bio-resonance Vocal Sound process there are two poles: the receiving person and the operator.

*The person receiving* the Vocal Sound treatment, takes part to the process simply being in bio-resonance in the process itself.

*The Operator* is the person that emits the bio-resonance sounds.

He acquired a specific training that makes him able to access various levels of intuitive listening.

He operates with a precise quality of intuitive presence, that let him to emit a sound according to the flow of perceiving, changing and following, likewise a flute is transparent to the flowing music.

The operator is trained to avoid any kind of *Linear* or *Deductive* choice and action during his performance.

Therefore any act decided a priori, or in a deductive way, or based exclusively on a technique or on a scheduled protocol, must be avoided.

### 3.2.2 *Vocal Glissato*

The procedure continues with the emission of a vocal “glissato”. The glissato is chosen for the specific features offered by it:

1. as a continuous field of frequencies available.
2. as a modality of emission which excludes an a priori choice of frequencies by the operator.
3. as a possibility to proceed in a non-linear way, being guided in a creative process and in a field of information accessible in a intuitive disposition.
4. as a possibility offered to explore the creative aspects which characterized the entire process itself.

### 3.2.3 *The Sound is made Stable*

Starting from the glissato, the sound tends to stabilize on a fundamental frequency.

This frequency includes and involves a spectrum of partials constantly changing in intensity.

This spectrum presents a continuum variation of proportion between the intensity of partials themselves.

The sonogram in Figure 1 represents a single photogram extracted in a moving film.

### 3.2.4 *Pure Harmonics*

While the sound is made stable the bio-resonance process becomes more and more aligned with the receiving person and his bio-energetic field.

The phenomenon manifests itself with a precise change in the behaviour of the sonogram. The continuous variation in the proportion of the intensity of the partials decreases, and the huge quantity of partials reduces, till few isolated frequency picks appear as shown in the sonograms in Figure 2-3-4.

Each single pick recorded by a voice performing such bio-resonance sound, shows the characteristics of the pure frequency emitted by a single diapason.

The perceiving corresponding sound acquires a particular audible quality.

The appearance of the pure frequencies remains characterized by a few number of picks, often stabilized in two or three of them which represent 5<sup>th</sup> and 8<sup>th</sup> intervals.

The process results particularly interesting when it is performed and recorded by a choir composed by few voices. The two pure harmonics appearing in the Figure 5 represents a sonogram recorded by a five voices choir: the operators were following the described bio-resonance process, singing a harmony of 5 parts.

We can observe that the pure frequencies appear when such bio-resonance Vocal Sound process is performed by a single voice as well as by a choir.

### 3.2.5 Creative Qualities in the proposed Bio-resonance process

The vocal emission that permits the appearance of the pure frequencies, evolves similarly to a creative process and flows likewise the writing of a musical score takes form.

Such creative process is generated by an intuitive awareness while pure frequencies suddenly disappear in the instant when the operator enter a field of logic, rational and linear thinking.

The constant flux of pure frequencies is the natural consequence of the process performed by the operator while he is perceiving, being changed and following the bio-resonance wave.

The fundamental ingredient of the described intuitive way of operating is the “creative undergoing” *aware and not schedulable*.

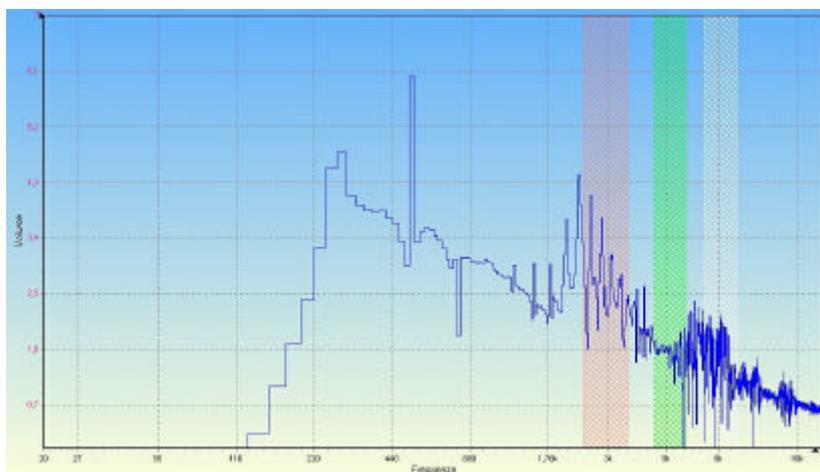


Figure 1. Example of the intensity sonogram of a common vocal sound emission (the human voice frequency range is ~80-1000 Hz).

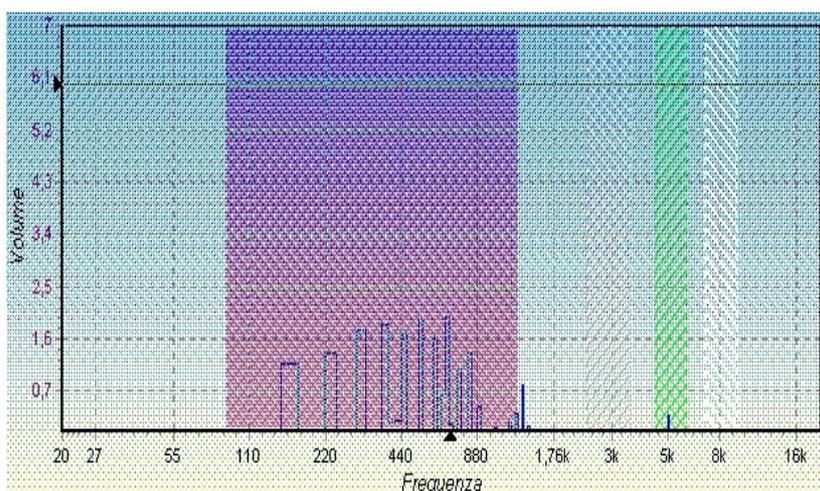


Figure 2. Sonogram of a single emitting voice during a Vocal Sound bio-resonance process (the human voice frequency range is ~80-1000 Hz).

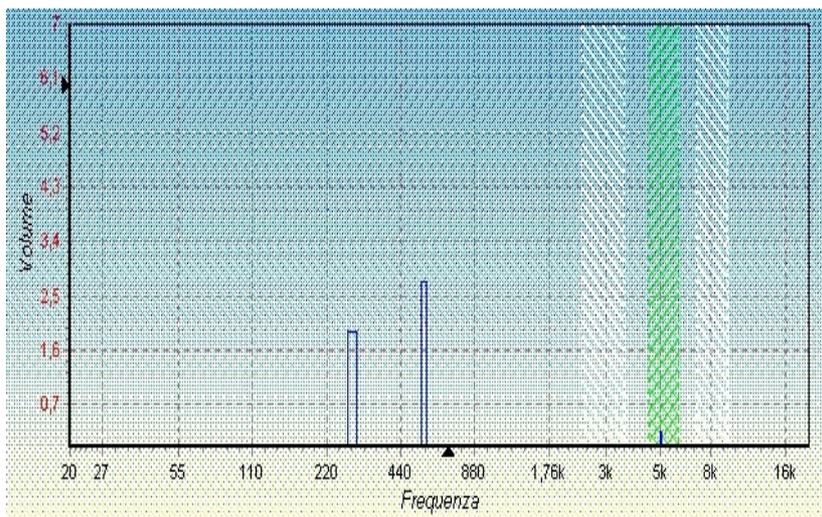


Figure 3. Sonogram of a single emitting voice during a Vocal Sound bio-resonance process (the human voice frequency range is ~80-1000 Hz).

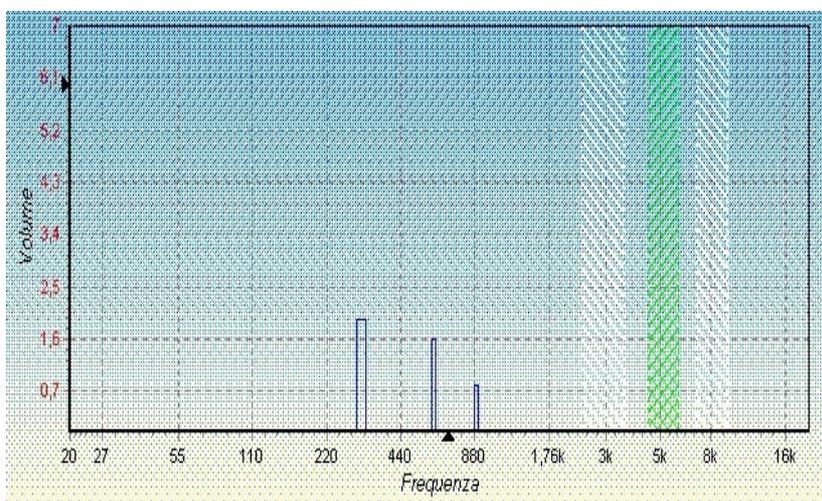


Figure 4. Sonogram of a single emitting voice during a Vocal Sound bio-resonance process (the human voice frequency range is ~80-1000 Hz).

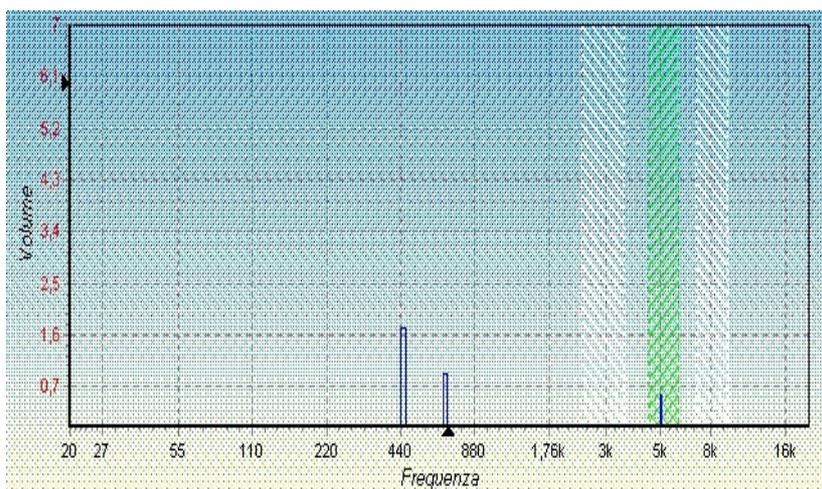


Figure 5. Sonogram of a 5 voice choir during a Vocal Sound bio-resonance process (the human voice frequency range is ~80-1000 Hz).

## 4. CONCLUSIONS

### 4.1 Non linear correspondence

This research proposes a non direct relation between the emerged pure frequencies and the corresponding rebalanced bio-energetic values.

Moreover the Anna Bacchia Vocal Sound Laboratory research puts in evidence the complexity of the creative operating in bio-resonance, also regarding physical, emotional, mental, psychological and archetype and ontological elements involved.

### 4.2 A proposal of new observation and interpretation models

Given this, apparently different elements demand to be unified in a cognitive context able to include and comprehend them like aspects of a unique nature.

In order to recognize this unique nature of still separated disciplines, the proposal of this research is first to introduce non-linear interpreting and cognitive models, second to explore different levels of awareness in the interaction between the creative field of vocal frequencies and the ontological qualities.

## REFERENCES

- [1] A. Bacchia, "Research Observations on Human Response to Sound and Vibration", *Proceedings of the Seventh International Congress on Sound and Vibration (ICSV7)*, 4-7 July 2000, Garmish-Partenkirchen, Germany.
- [2] A. Bacchia, "Human Response to Sound and Vibration: Vocal Sound and Bioresonance", *Proceedings of the 8th International Congress on Sound and Vibration (ICSV8)*, 2-6 July 2001, Hong Kong, China.
- [3] A. Bacchia, "Observations on how Vocal Sound Frequencies influence the Human Organism's Bioenergetic Field", *Proceedings of the Ninth International Congress on Sound and Vibration (ICSV9)*, 8-11 July 2002, Orlando, Florida, USA.
- [4] A. Bava, F. Fabbro, *Funzioni del sistema nervosa e linguaggio*, Goliardica, Trieste, 1984.
- [5] D. Bohm, *Foundations of Physics*, 1975.
- [6] T. Buzan, *Use Both Sides of Your Brain*, Dutton, New York, 1976.
- [7] F. Capra, *Il punto di Svolta*, Feltrinelli, Milano, 1984.
- [8] F. Capra, *Il Tao della Fisica*, Adelphi, Milano, 1999.
- [9] G. M. Careni, *Il Respiro che Guarisce*, Tecniche Nuove, Milano, 2000.
- [10] M. Chia, *Tao Yoga*, Edizioni Mediterranee, Roma, 1994.
- [11] D. Chopra, *Quantum Healing*, Sperling & Kupfer, Cuneo, 1997.
- [12] G. Conforto, *LUH Il gioco cosmico dell'uomo*, Noesis, Roma, 1998.
- [13] P. Cosi, E. Magno Caldognetto, *Voce Canto Parlato*, Unipress, Padova, 2003.
- [14] M. Delli Ponti, B. Luban Piozza, *Il terzo Occhio*, Centro Scientifico, Torino, 1986.
- [15] A. Delmas, *Vie e centri nervosi*, Utet, Turin, Paris, 1971.
- [16] T. Deshimaru, *Vrai Zen*, Azi 17, Paris, 1990.
- [17] J. Dewey, *Art as Experience*, Perigee Books, New York, 1980.
- [18] C. Dsu Yao, R. Fassi, *Il Tai Chi Chuan*, De Vecchi, Milano, 1991.

- [19] J. J. L. Duyvendak, *Tao Te Ching*, Adelphi, Milano, 1973.
- [20] M. Ferrini, *La Filosofia delle Upanishad*, C. S. B., Pisa, 2002.
- [21] M. Ferrini, *La Psicologia del Vedanta*, C. S. B. Pisa, 2002.
- [22] R. Gerber, *Medicina Vibrazionale*, Lampis Zogno, Bergamo, 1998.
- [23] J. Goldman, *Il Potere di Guarigione dei Suoni*, Il Punto d'Incontro, Vicenza, 1996.
- [24] A. Good, D. W. Fisher, *Immunobiologia*, Zanichelli, Bologna, 1974.
- [25] R. Heinze, S. Vohmann-Heinze, *Programmazione Neuro-Linguistica*, Red, Como, 1998.
- [26] R. Jahn, B. Dunne, *Margins of Reality: the Role of Consciousness in the Physical World*, Jovanovich, New York, 1987.
- [27] B. Kohler, *Terapia di Biorisonanza*, Lungjohann, 1996.
- [28] A Lowen, *Bioenergetica*, Feltrinelli, Milano, 1996.
- [29] F. Maman, *Quando la Musica Guarisce*, Amrita, Torino, 1997
- [30] J. Miller, *I Veda*, Ubaldini, Roma, 1976.
- [31] J. Monod, *Il caso e la necessità*, Mondadori, Verona, 1973.
- [32] J. R. Pierce, *La Scienza del Suono*, Zanichelli, 1992.
- [33] C. A. Pinelli, F. Quilici, *L'Alba dell'Uomo*, De Donato, Bari, 1980.
- [34] S. Resnik, *Glaciazioni*, Bollati Boringheri, Torino, 2001.
- [35] V. Silvestrini, *Guida alla teoria della relatività*, Editori Riuniti, Roma, 1982.
- [36] J. Sundberg, *The Science of the Singing Voice*, Northern Illinois University Press, DeKalb, 1987.
- [37] A. Van Lysebeth, *Pranayama, la dinamica del respiro*, Astrolabio-Ubaldini, Roma, 1973.
- [38] S. Wilfart, *Il Canto dell'Essere*, Servitium, Bergamo, 2000.
- [39] A. Watts, *The Way of Zen*, Vintage Books, New York, 1957.