

Harmonizing Electro-Smog in the Built Environment Experimental Project in Hemberg, St. Gallen, Switzerland

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Abstract: - Electro-Smog as a subtle pollution has become one of the increasing problems inside our built environments. It is responsible for a condition known as electro hypersensitivity (EHS) as it is now being referred to by the Department of Health, the Health Protection Agency (HPA) and the World Health Organization (WHO). Most of the solutions to Electro-Smog focus on reducing the radiation exposure and the number of electrical and wireless appliances despite their major role in our daily life.

The paper argues that by using energy sciences such as BioGeometry, the harmful effects of electro smog will be neutralized. BioGeometry® uses specially designed shapes programmed according to a new 'Physics of Quality' to induce harmony in all levels of subtle energy in the environment.

An experimental pilot project using the science of BioGeometry to harmonize Electro-Smog that was carried out in Hemberg, St. Gallen, Switzerland will be presented.

The paper ends up with proposing the concept of BioGeometry to deal with Electro-Smog. While the shapes of Biogeometry used in Hemberg were applied to existing buildings, the concept of BioGeometry can be applied more effectively to architecture from the first steps of architectural design forming process.

The aim of this paper is not to determine a panacea for this crucial issue of electrosmog inside built environments but rather to build on the successful solutions of BioGeometry in Switzerland and open the door to a more in-depth debate, investigation, recommending further researches and measurements to study the role of an active architecture in solving the Electro-Smog issue.

Key Words: Electro-Smog, BioGeometry, Resonance, Physics of Quality, Subtle Energy, Architecture.

1 Introduction

With the advancement of modern technology and industrialization including microwaves, satellites, Bluetooth-enabled mobile devices, and mobile phones, people are becoming increasingly exposed to a multitude of invisible waves that pollute our atmosphere which has created a new environmental worry, Electro-Smog. This term refers to a subtle pollution of invisible electromagnetic radiation resulting from the use of both wireless technologies and intensive use of electricity.

Human beings normally spend more than 85% of their life-time inside buildings, which means that buildings should play a significant role in solving the problem of Electro-Smog.

New sciences, such as BioGeometry, have emerged as a response to this modern problem, which will be addressed in this paper by presenting a pilot project to harmonize Electro-Smog energies in Hemberg, St. Gallen, Switzerland. Thus, ends up with proposing the concept of BioGeometry, which is a

design language rooted in architecture to deal with Electro-Smog from the first steps of architectural design forming process.

This paper sheds the light on the role of active architectural design in controlling Electro-Smog effects based on actual successful applications.

2 Problem Formulation

Electro-Smog as an increasing problem inside our built environment has become one of the major problems that challenge architects and urban planners. Most of current solutions to Electro-Smog focus on reducing the radiation exposure and the number of electrical and wireless appliances despite their major role in our daily life, which reflects a contradiction in the era of information and the need for reconsidering new approaches to deal with the ever-increasing Electro-Smog in the environment.

Could architectural design naturalize the effect of negative energies inside architectural spaces?

The paper argues that by using subtle energy quality sciences such as BioGeometry in architecture, the harmful effects of electro smog can be effectively reduced.

3 Electro-Smog: a Health Risk Factor

The US Environmental Protection Agency (EPA) has stated that "indoor air pollution in residence, offices, schools, and other buildings are widely recognized as one of the most serious potential environmental risks to human health. This is, in fact, a much greater health threat than outdoor pollution" [1].

Indoor air pollution can be classified into five main categories: volatile organic compounds (VOCs), toxic by-products of combustion, pesticides, electromagnetic field pollution, and naturally occurring pollutants [2].

The magnetic field of the earth is vibrating at 7.8 hertz, a frequency to which the human body has adapted. The unnatural vibrations of Electro-Smog range from 50-60 hertz (for household appliances) to 200-300 hertz (for high-voltage power lines).

These electromagnetic waves are thousands of times stronger than the level used in the communication in our body cells.

Research has indicated that magnetic fields can induce a small electrical field inside the body which in turn creates an electric current in and around the cells. Some scientists think that current alerts the function of cell chemistry and can inhabit or enhance cell growth [1].

Many researchers have carried out experiments on the activity of electricity and magnetism in human being. Recent results showed that Electro-Smog is responsible for a condition known as electro sensitivity or electro hypersensitivity (EHS) as it is now being referred to by the Department of Health, the Health Protection Agency (HPA) and the World Health Organization (WHO).

According to medical research, the electro hypersensitivity (EHS) symptoms include: headaches, disruptive sleep patterns, chronic fatigue, depression, hypersensitivity and erratic blood pressure, skin complaints, behavioral patterns in children. Children, the elderly and anyone with a lowered immune system are most at risk from the health effects.

Different actions have been done in UK, Sweden, Germany, Netherlands, Austria, Ireland, and Norway to pressure the governments to take action in the face of the rapidly growing health issues that they attribute to Electro-Smog.

Although the major governments of Western Europe apply ICNIRP (the International Commission on Non-Ionizing Radiation Protection) guidelines in determining planning controls on wireless telecommunications, many people feel the effects of these systems at levels much lower than these guidelines.

ICNIRP guidelines were developed before the telecommunications network of today was rolled out. When the panel set the guidelines they could not have predicted that so many people would live day and night within such high levels of Electro-Smog [3].

4 BioGeometry and Architecture

In the past century, architecture has always been a minor science if it has been a science at all. Present day architects, who want to be scientific, try to incorporate the ideas of physics, psychology, and anthropology into their work...in the hope of keeping in tune with "scientific" times [4].

By emerging new sciences into architecture, some questions have been raised. How do sciences re-structure the identity of architecture, the concept of form, the meaning of space and time which motivate architects in the modern age? How buildings could be designed to heal and harmonize the negative energies fields created by modern technology?

BioGeometry is one of the new subtle energy quality sciences that emerged in architecture as a response to the hazards of modern technology.

4.1 What Is Biogeometry?

The word 'Geometry' has its roots in 'Geo' meaning earth, and 'metry' meaning to measure. In 'BioGeometry', 'Bio' was added in order to refer to the living energy of earth. It is a science and a forming design language, which use shapes, colours, motion, orientations and sounds to balance the qualities at all levels of energy in the surrounding environment.

All energies, including electromagnetic radiation, create secondary compression waves in the environment. The quality of this background of those inaudible sound waves is affected by shape in a similar way as in acoustics or aerodynamics. BioGeometry shapes are designed to introduce harmony to this background energy waves.

Biogeometrical shapes are two- or three-dimensional shapes, specially designed to interact with the energy fields of the earth to produce balancing effects on multiple levels of biological systems.

They have been developed and patented by Dr. Ibrahim F. Karim, D.Sc./(ETH-Zurich) Cairo, Egypt, through research since 1968.

Biogeometry is based on a growing stream of scientific research and is an applied science by virtue of its successful applicability in numerous fields. Research in BioGeometry was and still is mainly dedicated to the development of a new form of architecture that would enhance the human biological system and give a new meaning to the concept of "Home".

BioGeometry could be regarded as deciphering the universal language of form (color, sound, shape and orientation) in nature based on a new kind of physics of quality that takes man (The effect of everything on the living energy systems) into the formula of any activity or creation or design [5].

4.2 Physics of Quality in Biogeometry

There is a general growing awareness and concern about the limitations of contemporary science to explain the many faces of the phenomena we observe in life. Our present way of thinking has produced a split in our worldview. We consider only what is objective, measurable, repeatable, and quantifiable as scientific. Nature does not recognize our scientific units of measurement: the centimeter, inch, mile, volt etc., do not exist in nature; they are our way of understanding nature by quantifying it. When nature recognizes quantity, it does so by interacting with the "qualitative aspect of quantity." In nature, for example every number has a vibratory quality that can be transmitted through interaction and can produce certain effects on other energy systems. Quality and quantity are actually two faces of the same coin.

All senses produce similar patterns of nervous reaction to external stimuli. The problem lies in the ability to measure, and measurement must be based on a scale. If we had measurement scales for quality, it would become objective, and even quantifiable, which would then become scientific. Do such qualitative scales exist? They actually do exist within our mind: We have musical scales, colour scales, and in a less obvious way, also scent and touch scales. There are two different laws applying to each type of scale, one specific to that scale within its sensory range, and another of a transcendental nature applicable to all vibratory ranges. It is the latter type that interests us because it allows us to import some of the qualitative laws of each sense scale into the other. If a set of "universal laws of quality" could be built, new dimensions possibilities could be opened immediately. As an

example we could apply the laws of resonance, as found in sound, to colour, and would understand that similar colours can enter into resonance thus amplifying their energy effect.

In order to understand the difference between the perceived colour and the qualitative effect of colour on human systems; if a person is shown a red coloured paper, reactions on two levels will be got; the first obvious subjective effect is seeing a red coloured paper and reacting to it based on conscious and subconscious associations. On another level which is objective, system of person reacts to the effect of the quality of vibratory frequency on the energy field as part of the colour effect on him. However the red paper is placed out of this person's visionary field (behind him) but close to his body (within his energy field), the unperceived secondary effect only is obtained, which is purely objective. This second effect is not only in the colour range, as it is beyond the senses, but in all other sensory and extrasensory vibratory ranges as well, and as such form the basis of qualitative scales of measurement. BioGeometry is based on a 'physics of quality' which is a revolutionary scientific approach where qualitative scales of measurements are used to assess how things affect each other on an unperceivable subtle energy level. The 'physics of quality' combines the qualitative aspects of sensory perception with Pythagorean science of harmonic resonance to produce a system of universal qualities that serve as method of categorization and communication throughout all the vibratory ranges of the sensory and the extra-sensory total reality. The use of qualitative measurements scale opens the door to the study of effects and interactions between all types of living energy system [6].

The BioGeometry qualitative harmonic system is a methodology of creating proportions, angles, and geometric shapes based on two tables created by a multiple modulator (Corbusier) and Lambdoma (Pythagoras) methods. While Pythagorean harmonics are based on physical numerical ratios derived from string vibration to produce qualitative musical note ratios, BioGeometrical harmonics are based on a qualitative numerical series to produce quantitative numerical data. The BioGeometry series is based on numerical values that are in harmonic resonance with the energy balancing qualities found in special earth subtle energy power spots that have been detected and used for sacred buildings of Ancient Cultures. The BioGeometry harmonic system is a dimensioning system that produces subtle energy balancing effect in the environment through the proportional properties of shape.

4.3 Biogeometry and Qualitative Energy Balancing

There is a specific energy pattern of arrangement for every system that gives it its properties. Every energy pattern or grid must itself combine the qualities in a perfect balance for it to function properly. The state of perfect balance of the grid can further be detected through measurement on the human subtle energy functions using quality scales. There seems to be a very specific energy quality that can be detected when systems are in perfect balance. The energy quality is linked to a source beyond the time-space frame of the system itself. The balancing seems to come from a transcendental source. This can be understood when we take the analogy of the geometrical circle where the balance of the shape comes from the centre point. Whenever a system is in perfect balance, the three basic quality components of BioGeometry® are found: A higher harmonic of Gold quality, a higher harmonic of the ultra violet quality, and a communication carrier wave property. This quality is found in all sacred areas and monuments of ancient civilizations, shedding a light on their knowledge and interaction with the subtle energy qualities in nature.

5 Biogeometry Experimental Project

In autumn 2002, a mobile phone aerial was put into operation in a church tower in Hemberg, Switzerland. This sounds like nothing new, but in fact it was the beginning of a very special chronicle. The Mediation Authority for Mobile Communication and the Environment (OMK) was informed by the residents that they suffered from sleeping disorders, headache and concentration deficiencies since the mobile phone antenna was put into operation. Furthermore, migratory and chirping birds have left.

The mediation office for mobile communication and the environment in Bern was able to convince Swisscom to consider the possibilities of using BioGeometry in a pilot project for the harmonization of the environment in Hemberg [7].

5.1 Parties of the Project

- The Mediation Authority for Mobile Communication and Environment (OMK).
- Swisscom national mobile communication provider.
- BioGeometry Energy Systems AG, Switzerland.

5.2 What Has Been Done?

- OMK organized a meeting with the residents to investigate the problem.
- Inquires and information collected from the municipality of Hemberg, Swisscom, and state physician of St. Gallen, who has dealt with this problem, were carried out. The investigation revealed that process of antenna installation was correctly performed and the values were clearly below the limits for non-ionizing radiation.
- On the other hand, residents didn't stop complaining till August 2003 when OMK and Swisscom announced their participation in a pilot research project with Dr. Ibrahim Karim, the founder of BioGeometry.

5.3 The Method

Six houses (35 persons) were chosen as the sample for detailed study for the pilot project in regard to earth emissions and electro-magnetic disturbance sources as shown in figure 1. BioGeometry shapes were installed on the electrical cables and water pipes in the houses.

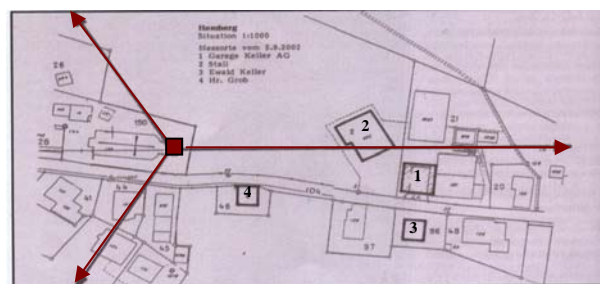


Fig. 1 Location map revealing the position of the antenna in the church tower and the houses, in which the measurements were taken

BioGeometry emitters with laser-like subtle energy radiation, as shown in figure 2, were installed and directed toward distant electromagnetic sources. Other shapes were put on earth radiation guidelines.



Fig. 2 holding device of BioGeometric features to harmonize mobile disturbance

In cooperation with Swisscom, BioGeometry shapes were installed in the church tower on the antenna and the cables, which extend from the electrical box

to the antenna. Specially programmed CDs were installed at this location too.

The BioGeometry emitters were further developed to withstand winter snow. The solution was further developed to include effects of industrial sources and periodical military maneuvers. Wide area coverage emitters were tested in new research that was later applied in a second project in Hirschberg, Appenzell.

5.4 The Results

On October 6 and 12, 2004 a second assessment was made. The official 12-page Electro-Smog questionnaire used in Switzerland and Germany was used for the assessment of the complaints before and after the installation. The participants marked their complaints according to a scale, which included 4 intensity grades of their symptoms. The surveys provided a comparison for the quality of life assessment before and after the BioGeometry installations. The number of persons in the study group was determined for the quality of life assessment based on all symptoms but is not statically significant for medical research into each symptom, which was beyond the project goals or budget. The results of the questionnaire showed that an increase of complaints was revealed in regard to number and intensity after putting the antenna into operation. This was followed with an obvious improvement after the BioGeometry installations as shown in figure 3 and figure 4.

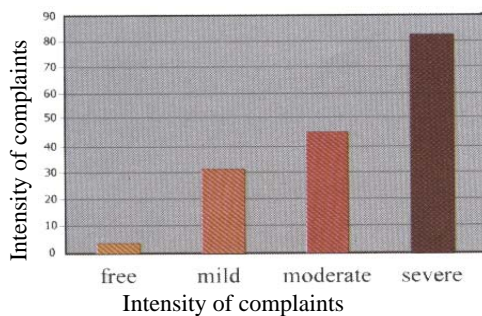


Fig.3 Complaints scale autumn 2002 (with antenna)

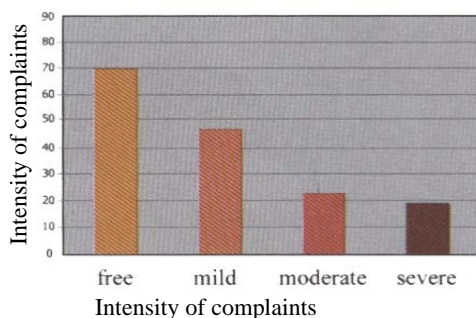


Fig.4 Complaints scale autumn 2004 (With antenna, after BioGeometric installations)

5.5 The Second Stage of the Swiss Project

Antenna tower Hirschberg is a scientific research project.

Inhabitants in the area of the antenna installation in Hirschberg have recently complained about problems they attribute to the radiation stress caused by this installation. The "Standescommission", the Mediation Authority for Mobile communication and environment (OMK) as well as Swisscom, the owner of the plant, dealt immediately with this situation. In a meeting on 20th April, 2005, the representatives of the above-mentioned bodies have thoroughly discussed the problem and took the following decisions:

1- The government of Kanton Appenzell IR. will undertake a project to use BioGeometry to harmonize the radiation stress around the antenna in Hirschberg. The preparations for this experiment will be done immediately by OMK who will also undertake the management of the project.

2- The media and the inhabitants will be informed in detail by OMK before the start of the project. More information will be given solely by OMK upon having established intermediate results and at the final results. Other than this official information, neither the Kanton of Appenzell I.Rh. or the OMK will give any further information. This is in order to insure an uninterrupted preparation, execution, and evaluation of the project. This second project was the second step in a total Swiss solution.

Finally the government of Kanton Appenzell IR, under pressure due to political unrest around the antenna, directly commissioned BioGeometry Energy systems AG to start the project immediately. The project was done in two phases: The first was to develop a single house solution that can be individually applied by anybody anywhere. After the successful results of this phase, the second phase implemented a central solution with shapes placed within tubes in the ground with an additional central combination of shapes above the ground. This central solution was placed in a field on the hill in Hirschberg to cover that area and the whole town in the valley. The success of the solution received wide media coverage. The final study for this project, which has not been published yet, shows similar results as in Hemberg with a more detailed assessment of animal and plant health.

6 Problem Solution

The problem of Electro-Smog should be dealt by new approaches using the concept of energy balance.

BioGeometry is one of the new sciences, which is applied in architecture for existing buildings as well as new designs.

-Existing buildings: Special BioGeometry shapes are installed in the electrical and water systems. The Earth Energy grids (Hartmann, Curry, etc.) are mapped and other shapes are installed on their paths. BioGeometry emitters are fixed and aimed at external electromagnetic sources to neutralize their harmful effects. There are also shapes that are buried in the ground to interact with the Earth's magnetic field. There are central wide area solutions, such as used in Hemberg and Hirschberg as well as individual house solutions (Home-kits) that were developed in the first research phase of the Hirschberg project. The short and long-term effects of those solutions have been widely acclaimed by the government, Swisscom, and the Swiss media.

- **New buildings design:** Apply the concept of BioGeometry to architectural design from the first steps of the design forming process as follows:

A- Site investigations

Site should be investigated according to:

- Energy grid lines survey.
 - Geopathic stress survey.
- (These are done by specialists in those disciplines)
- High power lines, radio, TV and MW towers survey.
 - Survey of nearby disturbances from industrial installations.
 - Abnormal phenomena (Radioactivity, Radon, materials, displacements etc.) in the site survey.

B- Design concept

- Determine the energy patterns of Earth energy grids to use as a modular system in the design.
- Apply energy quality criteria and principles of design for each function of architectural spaces. The design principles of BioGeometry are extensions of existing design principles related to shape, such as rotation, shifting, transparency and interfacing to produce a qualitative subtle energy balancing effect that is essential for harmony of all life systems. This is achieved by applying BioGeometry qualitative harmonics to the design principles in the design forming process.

C- Physical environment

- Select building material according to EMR and toxicity factors.

- Design artificial and natural lighting according EMR and (Psycho) biological effects study.

D- Interior design

- Apply the BioGeometry harmonic system to shapes and angles for energy quality inside architectural spaces.
- Determine chromatic energy and wavelength of each color inside space, and its qualitative subtle energy effect on life systems.

E- Energy quality check

- Measure energy quality inside architectural space .
- Analyze energy quality short and long-term effects through the use of quality of life evaluation questionnaires, such as the official Electro-Smog Questionnaire used in Switzerland and Germany or the WHO quality of life questionnaire.
- Surveys of human, animal, and plant health before and after the application of BioGeometry. This is usually done by independent organizations (such as the Baubiologie Informations Genossenschaft in St. Gallen, who did the evaluation study for Hemberg).
- Annual energy quality check.

Note: this paper was written with collaboration with Dr. Ibrahim Karim, the founder of BioGeometry.

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