## Words, words, words...

Someone might walk into a building and say that they can "feel the vibrations". They don't mean that the building is moving......but perhaps they do, depending on how they are using "moving". Words can be misleading, so let's try again.

They don't mean that they can feel the floor going up and down. Their use of "vibrations" is non-scientific and emotional. The building has evoked a response, conditioned by their experiences, perhaps childhood memories and both sad and happy times. There are also those who believe it creates a good impression to "feel the vibrations", as this has implications of sensitivity and all its compassionate attributes.

Of course, you can't measure human sensitivity like you can the sensitivity of a microphone. For a microphone, sensitivity might be 50mV/Pa, but you would need a brain scan to show the source of, and then estimate a magnitude for, the sensitivity of a person.

There are many words which have a precise scientific meaning, and also have a wider popular one. For example, power, resonance, wave. We usually know their meaning from the context.

However, when scientific words are used in scientific discussions, by those who do not understand their correct scientific meaning, a communication problem arises. This occurs in acoustics, where a common difficulty is confusion between decibel level and loudness, or different views on what is meant by low frequency noise and infrasound. We should not expect to be entitled to our opinions on matters of proven scientific fact.

Not so solid "scientific" facts may be used to give popular credibility to what appears to be a crazy notion - the public loves to be persuaded by science, especially in matters of health. Take the recently introduced healthy water, H<sub>2</sub>Om, for which it is said that <sup>1</sup>

".....everything in the universe contains a vibrational resonance or frequency. There are several distinctive energetic frequencies that are infused in each bottle of  $H_2Om$ ".

The outcome is to

"send the powerful vibration of Love and Perfect Health out into the world"

Which brings us back to vibration, but don't make too much of a noise about it.

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## **GUANGDONG POLLUTION INDEX**

In China, the Guangdong Environmental Protection Department (GEPD) is preparing to set up a pollution warning system in an effort to protect its citizens. GEPD said that they would use an alarm system to take measures like limiting the number of vehicles in case of serious pollution. GEPD says it is currently studying the relation between dust and vehicle pollution. To that end, it has compiled an automotive exhaust pollution prevention rule, which has been submitted to other government agencies for approval. Chen Guangrong, the deputy director general of GEPD, said that during the just-ended 10th Five-Year Plan period, the environmental quality of air, water and noise in Guangdong Province remained stable, but the pollution caused more serious acid rain. According to statistics, eighteen regional cities in the province suffered from acid rain in 2005.

## **SUBWAY VIBRATION**

A dozen species of precious birds have stopped laying eggs since a subway was built under the Hongshan Forest Zoo in Nanjing. The city's No 1 subway line passes beneath the hill in the zoo where its precious birds live. According to Bian Haixia, a bird breeder, the birds' situation has been worsening in line with the subway construction and operation. Every African Ostrich in his zoo laid on average 16 eggs in 2002 and the success rate of insemination was as high as 85 per cent. Since the subway construction was initiated in October 2002 near the zoo, an African ostrich laid only 11 eggs in 2003 and seven eggs in 2004. They stopped laying eggs since 2005, the year the subway was put into operation. Ten other national level protected birds have also stopped producing, including the black-neck bar-tailed pheasants who not only decreased in laying eggs but also broke their own eggs. Bian says trains in the subway pass every three or four minutes under the hill, which in turn makes many of the birds run out of control. "But the cocktails living on the top of the 150-metre-high hill seem unaffected," Bian added. "If it proves the subway vibration is the generator, we will move those birds far away from the subway line. It might cost a lot of money since all the devices here are specially designed in accordance with the habits of those birds," said Bian. But according to Professor Yan Peishi, an expert in the lifestyle of birds with Nanjing Agriculture University, the changes in temperature, sunshine, and excessive human intervention were major factors influencing the lifestyle of birds. Yan said that he had never heard of subway vibrations influencing the biological circle of birds, but adds he did hear of cases when engine vibrations affected domestic birds in their breeding periods.