

COHERENT FREQUENCIES IN LIVING SYSTEMS AND HOMOEOPATHIC MEDICINE.

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Introduction

This interpretation of homoeopathy derives from 25-years of work on the interactions of electromagnetic fields with bio-materials and living systems^{1,2} and 15-years of work with patients hypersensitive to very low intensities of coherent electromagnetic frequencies in their environment^{3,4}. This led to the finding that a sealed tube of water could produce clinical effects after it had been exposed to an alternating magnetic field at a certain coherent frequency without any chemical contact. This "memory" of water^{5,6,7} for imprinted frequencies and the potency of a homoeopathic remedy requires the continued presence of the geomagnetic field, a steel box which reduces the ambient magnetic field below about 400 nT permanently erases "water memory" and homoeopathic potencies whether liquids, or solids⁷.

Coherent Frequencies in Water and Living Systems

Coherent frequencies can be measured in living systems⁸ these are observed to vary over a limited range in a quasi-periodic manner, this variability seems to be characteristic of living systems. Coherent frequencies and chemical structure have an essential duality without which, chemical analysis by spectroscopy would be impossible. Whether the frequencies involved in these effects are oscillations of an electric field, a magnetic field, a field of electromagnetic radiation, a vector potential field or, a macroscopic quantum field remains to be established. The interchange of internal radiation in water can give rise to a long range order and domains of electromagnetic coherence 75 nm in size as shown from *Quantum Field Theory* by Preparata and Del Giudice^{9,10}, it is a fundamental property of water at ordinary temperatures and occurs in the ground or unexcited state. Experimentally, these effects can also be produced by the field near a toroid^{6,11}, this generates a predominantly magnetic vector potential field and, the involvement of the vector potential in these effects confirms that they are quantum phenomena¹², not "classical" electromagnetic field phenomena.

Coherent Frequencies and Homoeopathic Potencies.

The twin homoeopathic principles of *Similarity* and *Potency* are seen in terms of patterns of coherence and frequency. In illness, either the body is not capable of generating frequencies essential for switching chemical activity on/off or, the action of the frequencies is blocked e.g. by chemical toxins. A homoeopathic remedy is seen as the source of this missing bio-information, a supply of *Similarity*. The medium with its "memory" imprinted with the required frequency information is the *Potency*. The homoeopathic "proving symptoms" correspond to excessive stimulation of a healthy system. It is to be expected that coherent environmental frequencies will produce in healthy persons the proving symptoms of their corresponding homoeopathic potencies. It must then be considered at what point does the chronic exposure to homoeopathic proving result in a condition indistinguishable from the disease state. Those frequencies which electromagnetically hypersensitive patients need to have stimulated have been found to be exactly those of the prescribed homoeopathic remedy and potency. In one case, where homoeopathic potencies of *Calc. Carb.* were being considered, only the 10M potency of *Calc. Carb.* was found to contain just those frequencies which the patient needed and this was the only potency suitable for the patient.

The Mechanism of Water Memory and Potency

ELF resonances between 4.2 Hz and 42 Hz have been measured in samples of n-pentane and n-hexane. They disappear when the samples are thoroughly dried over silica gel and re-appear when 14 ppm of water has been added. n-Pentane and n-hexane have absorption spectra in the region of the rotational spectrum of water, the possibility of interactions with the rotational spectrum of water was considered but, because of the large number of lines in this spectrum, it

was decided to consider lines giving coherence sufficient for the water vapour laser (357 cm^{-1} , 213 cm^{-1} and 128 cm^{-1}). The wave number differences between the 357 cm^{-1} and 213 cm^{-1} lines and the n-pentane and n-hexane absorption lines gives a set of frequencies for which the ratio to a corresponding measured ELF frequency was a constant having mean value: $Ratio = 1.91 \pm 0.12 \times 10^{11}\text{ Hz}_{\text{IR}} / \text{Hz}_{\text{ELF}}$ or $6.37\text{ cm}^{-1}\text{ per Hz}_{\text{ELF}}$.

If such water interactions involve the coherent water domains proposed by Preparata and Del Giudice, then the far-infrared rotational spectra and the ELF resonances must involve the rotation of coherence domains. Coherence frequency is inversely proportional to the effective mass of the coherence domain but, in the case of rotational motion this would be represented by its moment of inertia. Mathematically, the ratio of the moments of inertia of a disk of thickness 75 nm (one water domain) to a 75 nm sphere is known. Substituting the *Ratio* of the frequencies, the size of the disk of coherence of coherent domains comes to $50.4 \pm 0.8\text{ }\mu\text{m}$. As a check on the value of this *Ratio*, water potentised between 0.001 Hz and 0.01 Hz was measured between 200 MHz and 2.0 GHz. This gave an independent value for the $Ratio = 1.98 \pm 0.07 \times 10^{11}\text{ Hz} / \text{Hz}$. Imprinting between 200 MHz and 2 GHz and making the more difficult measurements between 0.001 Hz and 0.01 Hz gave the value of the $Ratio = 2.09 \pm 0.43 \times 10^{11}\text{ Hz} / \text{Hz}$. Thus far, this mechanism will account for the pattern of frequencies corresponding to a "mother tincture" and for low homoeopathic potencies where there is a significant chemical presence. When the spectra of the chemicals have been diluted away, all that is left are the very highly coherent rotational spectra of water and this must be where homoeopathic information is stored. For these lines to be narrow enough to store "water memory" and homoeopathic information, water coherence effects are essential.

Experiments

The following experiments were devised to test this hypothesis experimentally. All experiments started off with water which had been "erased" in a hypomagnetic (mumetal) box. The imprinting was done by succussing the water close to a toroidal coil fed with the frequency concerned.

1. The water line difference $357\text{ cm}^{-1} - 213\text{ cm}^{-1} = 144\text{ cm}^{-1}$ divided by the *Ratio* $6.37\text{ cm}^{-1}/\text{Hz}_{\text{ELF}}$ gives 22.6 Hz and $213\text{ cm}^{-1} - 128\text{ cm}^{-1} = 85\text{ cm}^{-1}$ divided by the *Ratio* gives 13.3 Hz. Both these frequencies were found in "erased" water, frequencies from other water line combinations are a possibility.
2. Water was imprinted by succussion at 10 Hz and the above frequencies disappeared, being replaced by 32.6 Hz and 13.6 Hz ($22.6 \pm 10\text{ Hz}$) and by 23.3 Hz and 3.3 Hz ($13.3 \pm 10\text{ Hz}$) and similarly for other frequencies imprinted into water. Imprinting produced two frequencies separated from the original by the imprinted frequency. When the imprint was greater than the original frequency, only the sum was observed.
3. Water was imprinted by succussion at 1 Hz. It was serially diluted tenfold (1+9), the 1 Hz remained. It was then potentised by succussion; the 1 Hz disappeared and was replaced by 10 Hz. Similarly for other frequencies and dilutions.
4. Water was imprinted by succussion at 1 Hz, 10 ml aliquots were diluted successively in 1 ml steps and each time potentised. The frequency remained at 1 Hz until the dilution 10 ml + 5 ml, when it became 1.5 Hz. It remained so until 10 ml + 10 ml when it jumped to 2 Hz. This shows that potentisation is only linear for certain dilution ratios and that there must be some 'selection rules'.
5. Water was imprinted by succussion at 1 Hz, aliquots were diluted in a sequence of integer amounts and succussed. In each case, the original 1 Hz disappeared being generally replaced by a frequency equal to the multiple of the dilution. Except that, while a 6-fold dilution gave 6 Hz, a 7-fold dilution also gave 6 Hz; the 11-fold and 13-fold to 19-fold dilutions resulted in no measurable imprints. The 20-fold to 23-fold dilutions all gave 20 Hz, the 24-fold to 29-fold dilutions all gave 24 Hz, the 30-fold dilution gave 30 Hz. Similar results were obtained with dilutions in multiples of 10, and 100 up to 1000-fold dilution again, with similar exceptions at 70-fold, 90-fold, 700-fold and 900-fold dilutions.

6. The writer had previously measured a sequence of potencies of thyroxin prepared by Dr. Christian Endler, Graz, which showed a general trend to higher frequencies for higher potencies¹³. Water, without contact with any potency, was imprinted with all the frequencies corresponding to thyroxin D15. It was then potentised to D16 by dilution and succussion, the frequencies additional to D16 now appeared. This was continued across the gap in the published data (due to the then available oscillators) as far as D20 where the as-published frequencies duly appeared. At present, the selection rules for dilution and succussion of complicated frequency patterns are not clear but the above is consistent with these results for potentisation of a single imprinted frequency.

Conclusion

A homoeopathic potency is first formed through interactions between the far-infrared rotational spectra of coherent water domains and those of the "mother tincture" then, with dilution and potentisation, only the coherent water spectra will remain and it is through the splitting of these spectral lines that the frequency information corresponding to a specific homoeopathic potency is stored. The low frequencies arise through massive coherent domains of coherence domains. Dilution and succussion increase the imprinted frequency generally in proportion but with some discontinuities.

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