

Fundamental Research

Homoeopathic Message for the Material Scientist

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Abstract

Homoeopathic medicines suggest that the memory of the removed guest material can be retained if the stepwise dilution is carried out with violent shaking at every step. It seems that this phenomenon is not exclusive for medicines alone. Such memory retention, if it could be observed outside medicine, can do wonders in material science and in homoeopathy itself.

Introduction

Scientists working in semiconductors and material science should keep an eye on the developments taking place in the understanding of homoeopathy, especially its medicines, which are prepared through a typical process known as "potentization." Potentization invites serial dilution with succession (violent strokes) or trituration at each stage. Trituration is a fine grinding process of the basic drug with lactose, cane sugar, etc. This is used when a basic drug is not soluble in water or alcohol. Potency levels are designated by 'X' or 'C', if they have been diluted 1:10 or 1:100 respectively at each stage. Without succession (or trituration) a dilution is devoid of any therapeutic value and cannot be termed "potency". Thus, a 12C potency has been diluted 12 times in 1:100. Avogadro's hypothesis suggests that there would be hardly any molecule of the original drug present in the patient's dose of centesimal potencies higher than the 12th. But even higher centesimal potencies like 200, 1000, 10000 etc. are routinely used in homoeopathic

practice for better results. It is often observed that the higher the potency, the better the information it possesses.

Thus, a homoeopathic medicine is unlikely to have any molecule of the original substance (drug) but retains full memory of it. Hahnemann himself was the first to recognize that the solution to this fundamental scientific problem posed in homoeopathy must be sought in physics, not chemistry¹. Here semiconductors and like materials may be useful to observe and explore this strange physical phenomenon that may shake the present-day physics and may take us into new era of materials. Man is just one sensitive "instrument" detecting and responding to this phenomenon.

State of Physics

Homoeopathy remains highly controversial and had been accused of violating scientific laws, including the most fundamental, such as the Second Law of Thermodynamics, it is claimed that acceptance of homoeopathy would entail "rewriting of text books"². However recently, four independent paradoxes have been proposed that appear to challenge the Second Law of Thermodynamics³.

It has been reported⁴ that Natrium muriaticum 1M (a medicine prepared from sodium chloride but unlikely to have any molecule of it) sprayed into a vacuum produced spectrum characteristic of sodium. NMR spectroscopy also shows clearly

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that homoeopathic medicines are different from "controls" (unsuccussed solutions or host) but the interpretation and significance of results so obtained remain obscure⁵. Further, Shui-Yin Lo reports that he saw ice-crystals of unique geometrical form, charge, and density at room temperature in homoeopathic medicines with the aid of an electron microscope and an atomic force microscope⁶.

Many interpretations and theories have been put forward to explain the unusual phenomenon of homoeopathy. Most important of them is from quantum field theory developed by physicists del Giudice and Preparata⁷ for condensed matter. This theory is nicknamed as the "memory of water" theory. Utilizing the time dependent radiative part of the electromagnetic field, "coherent regime" is developed in this theory where particles lose their individual identity. Another theory getting popular is chaos, which is the science encountered in systems that behave unpredictably and apparently randomly, even when the forces involved are governed by well-understood principles of classical physics⁸. It should be noted that these interpretations and theories are not exclusive for homoeopathic medicines only.

Semiconductors and Materials

Some observations suggesting a homoeopathic potentization type study of semiconductors and other materials are as follows:

1. Some therapeutically inert substances, like silica, become powerful medicines in higher potencies suggesting that the vehicle (host) may retain the memory of any substance.
2. Theoretical explanations emerging from chaos theory and quantum field theory are not exclusively for medicines.
3. Potencies prepared in the atmosphere of nitrogen are inactive; the semiconductor wafers with low oxygen content do not have sufficient

mechanical strength for IC/device fabrication; and any high T_c superconducting material devoid of oxygen is not possible.

Rawson⁹ proposed that the role of an original drug in a homoeopathic medicine is the same as that of the doping material in a semiconductor. This analogy, however, should be taken with caution. The doping material in a semiconductor provides charge carriers to the host but not its chemical property. But such semiconductors are also prepared without carrying out any homoeopathic potentization type processes in them. So taking a suitable impurity with a suitable host material (in the beginning a polar one) serial triturations (or succussed dilutions) should be carried out even far beyond the Avogadro limit, and the nature of the substance so obtained should be explored carefully. Very high and very low temperatures should be avoided at first as the strange phenomenon might be disrupted as happens with homoeopathic medicines. It should be noted that this "homoeopathic phenomenon" does not necessarily mean that "ghost" of the guest somewhat in the form of a replica is present in the host. A guest may also leave its impression on the host in a manner in which a living organism identifies the guest itself. Actually, homeopaths perceive that the "ghost" is identified and works through a subtle and more efficient mechanism other than the crude bio-chemical one. Further, it should also be noted that in serial triturations a type of rhythm may be observed in which certain triturations may exhibit the strange phenomenon while some none at all. Materials so obtained are expected to be more active and informative, if one takes an analogy from homoeopathy.

Conclusion

There is an urgent need to explore "homoeopathic phenomenon" outside medicine. Once it is "caught" there, skepticism against homoeopathy would go. Further, outside biology, its intricacies could be understood with comparative ease. Homoeopathy could then be

developed further to achieve the best possible results. Further, non-therapeutic applications of this phenomenon could result in ways to change our lives. It might even revolutionize material science, leading to a paradigm shift in physics.

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