

LETTER TO THE EDITOR

“Homeopathy: Ex nihilo fit nihil”?

Dear Editor,

We recently came across an article by Prof. M. Pandolfi in the European Journal of Internal Medicine.¹ This contribution reads like a letter to the editor but appears as a ‘special article’, a type of article not included in the journal’s editorial submission checklist. It is not a scientific paper, since it does not report methods or any results. It would have been more honest to publish it as an editorial.

Some years ago we chanced upon Titus Lucretius Caro’s *De Rerum Natura*.² Lucretius (98–55 BC.) was a Roman philosopher known for his naturalistic view. We tend to agree with Pandolfi when he (wrongly) quotes Lucretius as saying *ex nihilo fit nihil*, this quotation (correctly *ex nihilo nihil fit*) should have been attributed to René Descartes in his *Principia Philosophiae*. Lucretius’s concept of nothingness was not an ‘empty’ non-being. He said “*nil igitur fieri de nilo posse fatendumst, semine quando opus est rebus quo quaeque creatae aeris in teneras possint proferri auras*” (One must admit that nothing can rise from nothingness, as things need a seed, from which each thing, once generated, can spread out in the light breath of air...)², further on, he wondered about the order of cosmos (*neque forte deum nobis immense potestas sit, vario motu quae candida sidera versit*) (and, by chance, isn’t that a great divine power turning shining stars in their movings shows himself to all of us?)².

The concept of never ending creation leads to two consequences: the eternity of being: “*Haud igitur penitus pereunt quaecumque videntur...*” (Hence, whatever is visible will never die’)²; and the ‘hidden’ reality of non-visible things which bond visible things “*quod nequeunt oculis rerum primordia cerni accipe praeterea quae corpore tute necessest confiteare esse in rebus nec posse videri*” (since primordial elements cannot be seen by eyes, listen how many bodies you too have to recognize which are in nature though they cannot be seen).² And the concept of vacuum: “*Nec tamen undique corporea stipata tenentur omnia natura; namque est in rebus inane...Est igitur nimirum id quod ratione sagaci quaerimus admixtum rebus, quod inane vocamus...*” (But everything is not made of tight compact matter, as it has vacuum within. What we see with our intelligent minds for, it does exist really, mixed with matter and it is called vacuum...).² Thus Lucretius could be considered a forerunner of modern physics.^{2,3}

Ancient philosophers, as proto-scientists, held different views about natural world and many hard questions still remain the same throughout the history of human knowledge. Lucretius believed in indivisible atoms, Anaxagoras of

Clazomene (5th century BC) in the infinite divisibility of atoms. Who was right? In 1935 Einstein, Podolsky and Rosen questioned whether quantum physics could depict reality or if physical theory should be newly addressed. When we talk about quantum physics we should not confound it with physical reality and thus be much more cautious. Lucretius replaced *horror vacui* with the immortality of matter through its never ending transformation. So, in quoting Lucretius, we admit that matter can contain vacuum, but never ‘nihil’. Modern physics has dramatically changed this picture. We can replace Descartes “*ex nihilo nihil fit*” with *ex nihilo omnia* if we consider nothingness as quantum vacuum. Vacuum and nothingness are non interchangeable words. Nothingness is not present within matter. Quantum vacuum is present, but it is able to produce photons which can affect matter.

Pandolfi starts by misquoting Lucretius, then goes on to quote Wilkinson’s mocking article on homeopathy and quantum physics in the Annals of Improbable Research-Newsletter.⁴ Why does he not report a genuine reference to quantum physics? Perhaps Pandolfi has read Milgrom’s work.^{5–8} This may be difficult to understand, due to our inability to comprehend quantum physics, as pointed out by Feynman. Can humans be entangled? Gisin *et al.* wondered if entanglement could be seen by humans:⁹ this strange question is speakable in physics, it is not black magic. These issues should be faced in a scientific debate, not mocked. There is evidence that quantum phenomena are not limited to the sub-atomic scale.^{10–14} We do not know if clinical research in homeopathy fails due to “*the collapse of wave function of an entangled state patient-practitioner*”. This is a very difficult concept to understand.¹⁵

Consciousness and wave function collapse are not necessarily separate¹⁶ and it would be preferable if this topic was confronted with the genuine curiosity of scientific research. But this is very difficult, if the starting point is not serious reasoning. Why does Pandolfi talk of nothingness? He discusses *Oscilloccinum* but does he know what this preparation ‘really’ contains? In quoting Descartes we suspect that he means to imply that all homeopathic remedies contain ‘nothingness’: is that certain? What would Lucretius have made of that? How should we define this entity within matter which Pandolfi calls ‘nothingness’? This is an interesting issue for condensed matter physics. But Pandolfi prefers to joke, especially when in conclusion he speaks of statistics, forgetting, perhaps, how many incongruent P values are reported in prestigious medical papers.¹⁷

References

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