Can the environment be ill? A mere glance at what happens around us is enough to provide an answer. The next question that naturally pops up in our minds is: how to cure it? Now the answer is not so immediate, but demands more thorough analysis.

A first attempt at a solution might be to fight against everything we consider to be wrong. This is a typical human trend, however, the results are often not too efficient, because the impulse to “fight against” something triggers a kind of positive feedback or recursive effect - as the target always reacts - thus giving rise to a degenerative looping movement. As a consequence, the basic problem remains unsolved, eventually under a different shape.

Another possible approach is to build a new template and let it grow, in such a way that it can naturally replace the older one. This path requires time and patience, but its results seem to be more durable. In this regard, a lecture given by Monica Souza, a young veterinary doctor, at the Brazilian Congress of Veterinary Homeopathy in 2011 is worthy of notice. In that lecture, Souza described her experience in reorganizing a farm that exhibited serious productivity problems. The initial scenario was discouraging: the soil was subjected to erosion, the cattle were severely sick, the employees were demoralized, and the farm owner had progressive cancer and serious depression. To plan a solution, Souza had recourse to all the knowledge she had about the environment, homeopathy and biodynamic agriculture. Thus, she found that the first step was to correct the soil erosion, and the pasture was reconstituted. The animals were treated with homeopathy and improved so much that the employees and the farm owner's family felt encouraged looking for a homeopath doctor in the city. As a consequence, the farm owner overcame his depression and cancer, and agreed to perform a treatment consisting in the combination of homeopathy and conventional anti-neoplastic drugs. Two years later, the full system was completely reorganized and all its components were healthy. It goes without saying that Souza’s lecture was met with a standing ovation.

That anecdote provides a good example of the efficiency of non-excluding systemic approaches to complex problems. Knowing them deeply can also be a tool to avoid the risks of pseudo-science. Shortly, the combination of a cross-sectional view with thorough understanding of the whole web often can help us to find appropriate methods to solve problems. Surely, experimentation, modeling, statistics and rigorous scientific methods are essential tools to formulate sound approaches in this new and frontier science. I believe that homeopathy and high dilutions have a significant role to play in this regard. The work performed in the past 30 years in the construction of homeopathy scientific basis allowed transforming a 19th-century doctrine into a new and promising 21st-century science.

At a recent scientific event conducted in Rio de Janeiro, Professor Carolina Oliveira made a very interesting observation, to wit, that the path of study of homeopathic agents is the opposite of the one of conventional
drugs. I think she was right. As it is known, the latter starts from in vitro studies to move on to the inexorable in vivo studies of efficacy and safety, before the four phases of human clinical trials can be started. Contrariwise, the study of homeopathic medicines started by the compilation of clinical evidences from Hahnemann’s time to this day, from the case-report to the complex clinical trials, involving human and animal cases. Then, in the past three decades, laboratory animal models originally fit to demonstrate the biological effects of those drugs using objective parameters – and thus, the plausibility of the similia principle – lead us to a deeper understanding about the non-linear systemic features of the homeopathic phenomenon, by the observation of coherent interactions among neuro-immune-endocrine parameters after performing a specific treatment, producing the reestablishment of the homeostasis at different levels, at the same time. Actually, the main contribution of these models was to give a first step toward the elucidation of the mechanism of action, going forward to its original purpose. Very recently, new in vitro and plant models have been formulated as an innovative way to demonstrate the cellular and molecular grounds of the similia principle. As those models are non-labile to placebo effects, they were widely accepted by researchers insomuch as they represent a significant technical and bioethical refinement.

These progressive advances in the methods applied to the study of homeopathic agents allow forecasting that the mechanism of action of these remedies will be elucidated in a not so far future, but more than that, they show that the notions formulated in and the challenges posed by homeopathy might contribute to the construction of a new scientific worldview.

Traditional homeopathic doctors are concerned with the usefulness of science to homeopathy. Conversely, I prefer to focus on the usefulness of homeopathy to science. True knowledge is never exclusive, but systematically inclusive.

A thorough understanding of the biological effects of the homeopathic agents requires a systemic approach. Recent epigenetic studies show changes in the combinatory codes of gene expression following the application of homeopathic stimuli, as well as changes in the phenotype pattern of the cell surface and refinement of the cell signaling modulation (see GIRI meeting annals 2012, 2013 and HRI Congress annals, 2013). The multiple shifts in the cell pathways found in those studies seem to result from a nonlinear biological action of the high dilutions, whose complexity and features seen in microscopic level are coherent with the properties previously reported in macroscopic, behavioral and clinical levels. In addition, those changes may exert impact on social relationships, as it is easily observed in groups of wild animals after certain homeopathic treatments. Those facts lend further support to the theoretical views formulated by Madeleine Bastide and Agnès Lagache in the 90’s, which represented the effects of the high dilutions and the similia principle as multilevel communication patterns.

The extension of that complex process of cell–system communication to the environment is a natural step. This involves scientists from different areas, as well as society at large. On those grounds, the elucidation of the mechanism of action of homeopathy and its potential application to balanced productivity and lifestyle might provide a starting point for new refined models of social organization, human relationships, animal care and management of nature.