

**THE EMERGING SCIENCE OF
HOMEOPATHY**

*Complexity, Biodynamics,
and Nanopharmacology*

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and Andrea Signorini, M.D.

Translated by Anthony Steele



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Foreword

In 1996 homeopathy celebrated its 200th anniversary. It originated with the seminal publication *Essay on New Curative Principle*, written by Dr. Samuel Hahnemann in 1796. The use of medicines on the basis of similarity was not new, and can be traced much earlier in the history of medicine, but Hahnemann was the first to systematize it and to introduce the very high dilutions or homeopathic potencies, which are the source of most of the controversy which surrounds homeopathy.

Over the last two centuries, the fortunes of homeopathy have fluctuated widely: for most of the 19th century, despite the sometimes vehement opposition of the medical establishment, it enjoyed a period of rapid growth, spreading widely and increasing in popularity throughout Europe and North America. This was followed by an equally dramatic decline in the 20th century, so that it had almost disappeared in the USA and been reduced to a shadow of its former self in Europe by the 1970s. Yet, in what must be one of the least anticipated recent developments in medicine, it has staged a strong, worldwide resurgence in the 1980s and 90s.

How are we to account for this roller-coaster evolution? Some of it can be explained by cultural and political factors, for instance, its decline in the USA was certainly hastened by the 1910 Flexner Report on medical education which resulted in the closure of most of the homeopathic medical colleges. While its recent renewal has been associated with growing disillusionment with conventional drug treatment and its adverse effects, the growth of a 'counter-culture' in the West, and the promotion of acupuncture in the Chinese Cultural Revolution in the 1960s and 70s.

But these cultural and political factors are not the motor driving the evolution of homeopathy. The roots of these fluctuations lie in its relationship with the evolving concepts of science, a relationship which has not always been comfortable, but which has had a profound influence on the perception of homeopathy by scientists, doctors, and the general public. The origins of the tangled relationship between homeopathy and science are to be found with the Italian aristocrat-scientist Count Amodeo Avogadro who, in 1811, enunciated the principle now known by his name, which enables the number of particles in a given mass of a substance to be calculated. The correctness and significance of Avogadro's Law was not generally appreciated until the mid-19th century. But when its implica-

tions for homeopathy were understood, the effect was profound, since it implies that none of the starting substance is present in the high “ultra-molecular” dilutions used in homeopathy.

This realization triggered a split in the homeopathic movement in the latter half of the 19th century, between the so-called “highs,” led by the American homeopath James T. Kent, who used very high dilutions on a theoretical basis influenced by Swedenborgian metaphysical concepts, and the “lows,” associated with the British homeopath Richard Hughes, who attempted to reconcile homeopathy with contemporary pathophysiological concepts.

But apparent scientific improbability is a two-edged sword, and, at the beginning of the 21st century, it is cutting the other way. Earlier, scientific preconceptions appeared to make homeopathy impossible. But we now have scientific methods sufficiently sensitive to demonstrate the actions of the very high dilutions used in homeopathy, providing empirical evidence of the reality of some of the claims made for homeopathy. At the same time theoretical concepts deriving from the leading edge of science are starting to provide a theoretical underpinning to the growing body of experimental evidence. The problem of “ultramolecular” dilutions are no longer the fundamental barrier to an understanding of homeopathy that were for earlier scientific conceptions. Homeopathy is now stimulating theoretical innovation, instead of theory inhibiting the acceptance of homeopathy.

Paolo Bellavite and Andreas Signorini provide an authoritative, up-to-date and comprehensive survey of the exciting empirical and theoretical developments in homeopathy. In addition to a thorough account of the empirical evidence, they give the best account I have read of the theoretical implications for homeopathy of the new sciences of chaos, complexity and information. I warmly recommend their book to all who are interested in understanding homeopathy, a therapy whose scientific time has finally arrived.

Dr. Peter Fisher
Director of Research
Royal London Homeopathic
Hospital, England

Preface to the Second Edition

This book is a compendium of the experience and ideas of its authors, a University Professor of General Pathology (P.B.) and a medical doctor using homeopathy as his main therapeutic method (A.S.), together with an updated review of the evidence emerging from the international literature in this field. The original core of the book was a research project, drafted in 1990 as a grant application to the Italian National Research Council. Drafting the project forced us to do a major rethink of the entire domain in order to pinpoint the most promising lines of experimental research. The sheer body of data collected, the vast array of problems encountered, and the interest they aroused in our minds prompted us to write this book.

The book first came out in Italian in 1993 and as the American edition in 1995 (*Homeopathy: A Frontier in Medical Science*), but the problems dealt with here not only have remained unsolved over the past years, but have increased in interest and relevance from both the scientific and the health and welfare standpoints. This is also the reason that we decided to adopt a new title focused more precisely on positioning this text in homeopathic and scientific literature.

As the term “nanotechnology” refers to the study and use of hyper-miniaturized technologies that can carry more and more bodies of information in smaller and smaller chips, likewise the term “nanopharmacology” may be appropriate to the newly defined field of homeopathic pharmacology. Here the term is not used to designate a precise dose/dilution (literally, the prefix “nano” would indicate one billionth of a unit) but simply the extremely low doses or even the high dilutions/dynamizations of medicines that are utilized in homeopathy. To understand the nature and the rationale of homeopathic nanopharmacology, it is important to know how the medicines are made (i.e. the role of drug potentiation) and how they could affect the behaviour of the system where such vectors of information act (i.e. the rules of complex biological networks that justify the specific hypersensitivity of the sick person to a specific medicine). Here we present a number of paths to understanding from a scientific standpoint how these extremely diluted medicines may act and, as a consequence, how the field of homeopathy could become a legitimate part of united medicine.

The book thus continues to grow and improve, but the original core of scientific ideas and proposals has maintained its soundness and validity. The information reported in the first version has been updated and ampli-

fied, with the addition of over two hundred new references. Several chapters have been supplemented and enlarged with additional evidence coming to light in the mean time in our and other laboratories worldwide.

Besides updating the references with particular regard to clinical research, which in recent years has given controversial results, we have added as an appendix two chapters that include a full rethinking of our view on homeopathic theory. By picking up qualifying points from the main text and revising them in light of subsequent published findings, we come to a more convincing re-evaluation of the two fundamental achievements of Hahnemann, i.e. the “simile” as a founding principle, and the homeopathic concept of drug “potency”. We present the basic research supporting the “*similia similibus curantur*” as a major principle in biology and pathology (appendix n. 1), then we suggest that the apparent homeopathic paradoxes can be understood only by using a logic based on dynamic systems theory (appendix n. 2). The old “vital force” is replaced with biodynamics and bioenergetics: many things are explained, but homeopathy still holds in part its mystery.

We were pleased with the enthusiastic response to this publication, which has been acknowledged as the first serious attempt to bridge the gap between two apparently conflicting medical approaches. In the introduction to the first edition, we expressly invited critical and even contradictory contributions to the theories that are expounded here. We have yet to receive any serious negative comments, but, needless to say, we remain open to criticism and indeed welcome it. In science, it is only by observing new phenomena and by eliminating errors in the antecedent theories that a more accurate picture of reality can be depicted.

During our work, we have benefited from the ideas and reference material provided by a large number of colleagues, among whom we would like to mention Jacques Benveniste, Sandro Bettini, Ivo Bianchi, Francesco Borghini, Adriana Carluccio, Maurizio Castellini, Anita Conforti, Elisabeth Davenas, Emilio Del Giudice, Emilio Dido, P. Christian Endler, Michael Kofler, Klaus Linde, Riccardo Ortolani, Pietro Piovesan, Bernard Poitevin, Fritz A. Popp, Giuliano Preparata, Giuliana Rapacioli, Beverly Rubik, Cyril W. Smith, Paolo Sommaruga, Massimo Sperini, Rosy Tommasoli, Roeland van Wiik, Hildebert Wagner, Harald Walach, and Otto Weingartner. Particular thanks are due to Dana Ullman for his enthusiastic support and advice, to Sarah Serafimidis for editorial assistance with the second edition of the book, to Mario Zatti for his help and encouragement and to Anthony Steele for his painstaking English translation.

We dedicate our efforts to the memory of our friend and colleague, Giovanni Scolaro.

—The Authors

*“Test everything;
hold fast what is good”*
—(St. Paul, I Thess., 5, 21)