

Criticism of Homeopathy

Part 3: The Concept of Science of Homeopathy

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Abstract

Aim: This article aims to demonstrate the main reason for methodically wrong criticisms on homeopathy using an inappropriate concept of science.

Method: The criteria of science and the most important scientific and medical basics of homeopathy are listed.

Result: Homeopathy meets the criteria of medicine, complementary medicine, holistic medicine and science. The medical and scientific principles of homeopathy are not comparable with the principles of conventional western medicine and natural science.

Conclusion: Homeopathy is a medicine and science with an independent concept of science. Therefore, most of the criteria of conventional western medicine and natural science are not valid for homeopathy and are consequently not appropriate for the evaluation of homeopathy.

The controversy about the science of homeopathy

The first two scientific papers of this series of articles^{1,2} point out that most of the criticism of homeopathy from the Medical University of Vienna and the mass media are based on methodological errors, application of an inadequate concept of science, non-consideration of the clinical experience on humans and animals, neglecting the available scientific literature and insufficient journalistic investigations.

Most critics ignore the positive results of the Health Technology Assessment Report of Gudrun Bornhoeft and Peter F. Matthiessen (2006)³, commissioned by the Swiss Government. This systematic literature research is based on 107 publications from 22 medical data bases and has proven the effects and efficacy of homeopathy, according to the criteria of evidence-based medicine. Furthermore, the positive results of a systematic review by Claudia Witt et al (2007)⁴ at the Charité University of Medicine in Berlin even provided evidence that the effects of homeopathic high potencies can be proven in test tubes.

Nevertheless, there are critics like Edzard Ernst or Simon Singh (2009), who stereotypically argue that there is no evidence of efficacy of homeopathy in 200 clinical studies, homeopathy is a “disproven method” and “a regression to the Middle Ages”⁵. Also daily newspapers^{6,7} take on these wrong statements without any further reflection. However, only somebody who is aware of the methodological weaknesses of placebo-controlled studies and evidence-based medicine with regard to complementary medicine is able to comprehend that issue.

Moreover, the concept of science of homeopathy is completely different from that of natural science and from that of conventional western medicine, which is based on natural science. Homeopathy is not a natural science and the effects of homeopathic remedies are not based on the dose-effect-relationship of pharmacology. Therefore, neither the principles of natural science nor the principles of conventional western medicine are appropriate evaluation criteria for homeopathy.

* Translation of the article “Homöopathie-Kritik. Teil 3: Der Wissenschaftsbegriff der Homöopathie” published in Homöopathie in Österreich 2009;4:19-25.

The background of the controversy about the science of homeopathy shows that it is not about a fair scientific discussion but rather personal views and scientific or religious ideologies, which are defended as “views of the world”. According to Herbert Pietschmann (2009)⁸ this conflict cannot be solved even by means of best studies, due to the fact that science and homeopathy rest upon different thinking frames and because “natural science is not based on facts but on consensus.” This statement shows that natural science and thus conventional western medicine are not interested to understand the reality but – like any other science – represent a view which is subjectively biased and adhere to consensus.

For conducting a dialogue with the critics and for its own interest homeopathy should increasingly deal with scientific questions and seek to reach this consensus. According to Pietschmann neither studies nor the “explanation” of homeopathy itself are adequate to solve this problem, but “the consensus that a particular explanation is the right one”, in other words that the explanations of homeopathy are accepted by the “scientific community” as being correct. In this context, the questions on the medical and scientific foundations and the mechanism of action of homeopathy should be answered. The discussion on the details of the mechanism of action and interpretations of study results cannot be started, before a consensus is achieved that these answers are “correct”.

In preparation for this consensus discussion this article should contribute to the following questions: “What is science?”, “What is medicine?”, “Is homeopathy a science?” and “What are the criteria of science in homeopathy?”

What is science?

According to Brockhaus (German encyclopaedia)⁹, science is the “quintessence of human knowledge of an era, which is systematically collected, stored, taught and passed on” and considered as “the totality of knowledge relating to one subject (German: Gegenstand) standing in a context of justification”. This definition indicates that science is nothing “fixed”, but related to time and tradition, and that science as a collection of knowledge is associated with one subject and is logically linked with it. Consequently, sciences are valid only within a particular area and their logic refers to that particular domain only. This implicates that the criteria and logic of natural science refer to its own domain only and cannot be applied to or demanded from other sciences.

Methodologically spoken, sciences are “ensured knowledge in a context of justification of phrases and thus inter-subjectively communicable and verifiable, which complies with certain scientific criteria (i.e. universal validity, capability of systematisation)”⁹, whereas the applied “methods are derived from the particular subjects”. This indicates that scientific methods have to correspond with the respective science. This applies to all sciences and consequently also to the evaluation of the science of homeopathy.

In the ancient world, there was no separation between individual domains of science. However, in the process of time several sub domains and two big methodically divided traditions of science evolved⁹:

- Natural sciences, based on observation, development of a hypothesis, experiment (testing the hypothesis, reproduction to falsify or verify it) and generation of theory as a way of gaining scientific knowledge¹⁰.
- Hermeneutics, a method of humanities, going beyond observation and also using historico-cultural interpretations.

The science of homeopathy

All these theoretical and methodological criteria including the basic way of the natural sciences to attain scientific knowledge in principal are fulfilled by homeopathy. According to Max Haidvogel (2001) homeopathy fulfils “all criteria required for being a science.”¹¹ Hence, homeopathy can be characterised as medical science and shows aspects of empirical science as well as applied science. Thus the statement of Margery Blackie¹², appointed by Elisabeth II of England 1968 as Her Royal Physician, is fully appropriate: “Homeopathy, formulated by Hahnemann, is the most scientific and successful system of medical treatments ever conceived”.

However, in the dialogue with the conventional western medicine the homeopathic science faces the problem that both forms of medicine are focusing on different fields of human reality¹³ and are therefore based on particular scientific foundations which are not comparable. This includes:

- Different thinking frames

The scientific thinking frame of homeopathy is not compatible with the scientific thinking frame of conventional western medicine and is outside the occidental thinking frame of modern science⁸. In terms of “scientific proofs”, the thinking frame of the occident focuses on reproducibility, quantification, analysis, lack of contradiction, consistency and causal evidence. These criteria, first formulated in Galileo Galilei’s “nova scienza”, are based upon “quantifiable” features and the “analysis” requires a “decomposition” of the explored phenomena. Therefore, natural science can analyse rather simple phenomena only.

In contrast, the thinking frame of homeopathy is based upon uniqueness (individual, subjective), qualitative features (symptoms, modalities, perceptions), synthesis (interconnection of all physical and mental fields), ambiguity and contradictory phenomena (different levels of similarity, holistic perception, open systems, individual objectives, constitutional influences, creative life processes), and it is also determined by the creativity of the therapist.

- Salutogenesis versus pathogenesis

Homeopathy is incompatible with the scientific principles of conventional western medicine and therefore cannot be explained with these principles. Conventional western medicine is based upon the “development of diseases” (pathogenesis) and therefore aims to heal and prevent diseases by applying external therapeutic methods. In contrast, homeopathy as an auto-regulative medicine is based upon the “development of health” (salutogenesis) and thus its objective is the remission and strengthening of health by stimulating the physiological self-healing^{14,15}.

- Self-healing power versus pharmacology

Homeopathic remedies are incompatible with the scientific principles of pharmacy and pharmacology and cannot be explained on these rationales. For healing, conventional western medicine uses biochemically strong acting drugs, prescribed according to the quantitative and statistical knowledge of pharmacology within a therapeutic dose-effect range. In contrast to this, homeopathy uses highly diluted, intrinsically weak acting remedies, which are prescribed on an individual basis according to the qualitative knowledge of the similia principle and the therapeutic criteria of the stimulus-reaction principle.

Therefore, the diagnostic and therapeutic principles of pharmacology (“artificial healing”) and the homeopathic stimulation of self-healing (“natural healing”) are incomparable with regard to anamnesis, concept of disease, prescription, active factors (German: Wirkfaktoren) and follow-up of the treatment.

- Practice versus science

Homeopathy is a practically oriented medicine which can be comprehended, taught and applied without any scientific explanation. For this reason most homeopathic physicians are not concerned with “science” and have little interest in exploring the scientific foundations of homeopathy. Many clinical and experimental studies have been performed and hypotheses on the mechanism of action have been published. But altogether the scientific foundations of homeopathy have not been investigated sufficiently yet.

The concept of science of homeopathy

Due to the missing systematic research on the medical and scientific foundations of homeopathy, publications revealing a comprehensive “concept of science” of homeopathy do not exist. The available literature focuses on partial fields of homeopathy (Hahnemann, similia principle, studies), compares with conventional western medicine and natural sciences, examines homeopathy from the philosophical view or uses the “concept of science” from the internal perspective of different homeopathic schools.

The available literature about the “concept of science” of homeopathy can be attributed to the following groups:

- Homeopathy: internal perspective

Georg Heinrich Gottlieb Jahr (1857)¹⁶, James Tyler Kent (1954)¹⁷, Margery Blackie (1990)¹², George Vithoulkas (1987)¹⁸, Rajan Sankaran (1995)¹⁹ and other authors used the term “science” in view of an internal homeopathic perspective for the theory and practice of homeopathy.

- Philosophy: Hahnemann

Ekkehard Fraentzki (1976, 2005)^{20,21}, Claus Just (1989)⁴⁸, Josef M. Schmidt (1990)²² and Volker Hess (1994)²³ investigated the philosophical conceptions of Hahnemann. A commentary about these and philosophical articles about the “a priori-question” and the simile principle was published by Klaus Holzapfel (2009).⁴⁹

- Philosophy: epistemology and science

Rudolf Flury (1979)²⁴ and Pierre Marie-Dominique Philippe (1994)²⁵ referred to epistemological aspects of homeopathy. Gerhard Resch and Viktor Gutmann (1987)^{26,27} combined epistemological approaches with scientific facts and hypotheses of homeopathy. Friedrich Dellmour (1997) investigated system-theoretical aspects of homeopathy.²⁸

- Natural science: clinical and experimental studies

Max Haidvogel (2001)¹¹ and other researchers used the concept of science for clinical and experimental studies and for the question on the homeopathic mechanism of action.

- Natural science: paradigm conflict

Friedrich Dellmour (1995, 1999, 2005)^{13,29,30,31}, Matthias Wischner (2004)³², Fraentzki (2008)³³, Pietschmann (2009)⁸ and Wolfgang Würger (2009)⁵⁰ investigated the paradigm conflict between homeopathy and conventional western medicine.

- Medicine: mechanism of action

Dellmour (1997, 2005)^{34,13} investigated the historical thinking model of vital force of Hahnemann and the medical relevance of the historical terms of Hahnemann and thereby detected a medical explanation of the mechanism of action of homeopathy. Dieter Melchart et al. (1993, 2002)^{14,15} investigated the foundations of auto-regulative medicine, thus allowing an understanding of the mechanism of action of homeopathy from a present point of view. Some authors presented quantum-medical attempts to explain homeopathy, which Pietschmann (2009)⁸ principally judged as not applicable.

These scientific contributions are not yet sufficient for a consensus with the conventional western medicine. However, they allow an overview of the medical and scientific foundations of homeopathy for the development of the concept of science of homeopathy and the consensus discussion with the conventional western medicine.

Scientific foundations

The physician, chemist and pharmacist Samuel Hahnemann habilitated at the University of Leipzig in 1812 and had an overview about the whole medical knowledge of his era. He was a member of several scientific societies, was elected to privy councillor (German: Hofrat) in 1822 and left a more extensive scientific writing legacy than Johann Wolfgang von Goethe. Hahnemann was one of the first physicians who documented all treatment data of his patients. As a thorough observer, he extensively published his research, so that even today the historical foundations of homeopathy can be reviewed.

Due to the deficiencies of the medicine of his time, Hahnemann was looking for a new therapeutic principle, which he found in the similia principle of homeopathy through the cinchona bark trial in 1790³⁸, and documented it with extensive references to literature³⁹. He exclusively based homeopathy on the sensually or mentally perceptible symptoms of the patients and developed it as a form of “sensorial medicine”¹³. Thereby all individual complaints of the patient are recorded qualitatively and descriptively through a verbal description referred as “disease picture”. As a result, homeopathy perceives both diseases and remedy actions through the reactions of the organism against the stimulus of the disease or the remedy. On this scientific basis, Hahnemann developed the method of proving the homeopathic efficacy of a drug on healthy volunteers as the most important element of homeopathy⁴¹ and as the pharmacodynamic foundation of the similia principle.^{42,43}

Hahnemann explained the reactions of the organism to all stimuli of remedies, diseases and the environment as an action of a so called “vital force”³⁴, a typical explanation for his time. This historical-scientific thinking model on the basis of a “general concept of force” nowadays appears to be identical with the process of auto-regulation¹³ effected by the autonomic nervous system. According to the current understanding of salutogenesis^{14,15}, Hahnemann’s thinking model can be considered as a stimulation of the physiological auto-regulation and self-healing¹³. Hence, as a working hypothesis it can be summarised that homeopathy and the homeopathic similia principle are based on a neuro-physiologic mechanism of action.⁴⁴

According to the stimulus-reaction principle, the homeopathic reactions of the organism in response to potentised remedies occur dose-independent. The “drug information” of homeopathic remedies is independent from molecular concentrations of the original medicinal substance and can be transferred via metallic conductors, electronically amplified and digitally saved. Hence homeopathy can be understood as “information medicine”.⁴⁴

Medical foundations

As a “medicine” (*ars medicina*, medical art of healing) homeopathy is a “science of the healthy and sick humans, about the causes, effects and the prevention and healing of diseases,”³⁵ an “art of healing” and a “medical science”³⁶. As a “complementary medicine” homeopathy is a “medical school of thought, applying particular diagnostic and therapeutic procedures, which are partly outside of the conventional western medicine and complementary to it. The foundations are self-healing processes, their stimulation and boost, adaptation as well as advancement of the resisting power and autonomy, empowerment, stimulus-reaction principles or processes of normalisation”³⁵. As a “holistic medicine” homeopathy is a “medical school of thought, which considers the patient within his mental-physical totality and his interaction with his environment. In contrast to the conventional western medicine, the subjectivity and individuality of symptoms and reactions are considered in diagnosis and therapy.”³⁶

Homeopathy fully complies with all three definitions. Hence, homeopathy is a medicine in accordance with the criteria of complementary medicine and holistic medicine. According to the European Committee for Homeopathy (2003)³⁷, homeopathy is a clinical method based on the similia principle.

Hence, homeopathy is based on other medical foundations than conventional western medicine. Some of these foundations taken from the above mentioned publications can be quoted as follows:

Anatomy:	autonomic nervous system and cerebral nervous system
Histology:	system of basic regulation
Physiology:	auto-regulation system, self-healing, salutogenesis
Pathology:	totality of symptoms, individual disease picture, doctrine of symptoms, modalities
Psychology:	body and mind as a functional unit
Pharmacology:	potentised remedies, bioinformative active principle, drug proving with healthy volunteers, drug picture, materia medica.

These medical and scientific foundations are based on distinct laws, principles and functions, which are unknown to conventional western medicine but have to be considered when evaluating homeopathy. The idea of man¹³ and the thinking frame of homeopathy^{13,31,34} are thus incompatible with conventional western medicine and are beyond the thinking frame of the natural sciences.

Homeopathy is an independent medical science, based on a systematically collected, scholarly and traditional knowledge, having a logical context of justification, proven to be successful on humans and animals in clinical practice and confirmed by clinical and experimental studies.

A scientific conflict

These foundations of the medical science of homeopathy are not known by most of the critics and often ignored in their criticisms. Many critics criticise aspects of homeopathy which do not correspond to their own concepts of science or their own view of the world, or they criticise weaknesses of homeopathy or single studies without considering the entire scientific literature available. In reality the critics do not direct their criticisms against homeopathy itself but against the contradictions to their own points of view.

This criticism appears as a clash of different scientific views and therefore disregards homeopathy. Herbert Pietschmann (2002, 2005, 2007)^{45,46,47} has investigated the origins of this kind of scientific conflicts. Thus, the criticism of homeopathy is not a constructive dialogue but a scientific conflict which is based on a one-sided thinking pattern of the natural sciences and the conventional western medicine in accordance with the axioms of occidental logic and their demands for “uniqueness and lack of contradiction”. This criticism is based on an epistemological weakness of the critics: “For anyone whose thinking is merely logic-rational all contradiction always appears to be a mistake which has to be eliminated. Thus, in any conflict one party is right and the other is wrong”⁴⁵. This rational thinking of “true or false” causes a kind of blindness of the critics towards reality. Various fields relevant for the health, disease and healing of humans are not comprehensible for the natural science and the conventional western medicine. Some of these fields are covered through homeopathy and can successfully be used in homeopathic therapy¹³. However, most critics are not conscious that the contradictions of homeopathy with their own points of view are not primarily based on “mistakes” of homeopathy, but on the limitations of their own thinking.

Furthermore, homeopaths and critics tend towards a dialectic weaknesses, which Pietschmann qualifies as “limitations” (German: Schatten, shadows). Critical persons solely representing their own views tend to be narrow-minded, whereas open-minded persons not critically questioning their own thinking processes tend to be gullible. Thus, the fight about “true or false” disregards homeopathy and appears as a fight against each other’s limitations. The critics are fighting against the nonreflective gullibility of individual homeopaths and the homeopaths are fighting against the nonreflective narrow-mindedness of individual critics. However, an objective dialogue would require the right balance in dealing with each own’s limitations. The lack of self-control therefore keeps both parties “within their own limitations”. Inflexible critics stay within their own narrow-mindedness while homeopaths open-minded for unscientific doctrines, are handicapped by their gullibility. Thus criticism fights against gullibility, open-mindedness against narrow-mindedness, or narrow-mindedness against gullibility. This fight might take an infinitely long time because both sides are right whilst gullibility and narrow-mindedness are not appropriate for the establishment of truth in complex medical issues.

Herbert Pietschmann diagrammed this dialectic process as a “HX-confusion”^{45,46,47} and suggested a solution for this conflict. Both conflict partners have to realise that their own limitations are their true opponents and have to be brought under control to allow a progress of the dialectic process for a synthesis. In this way the conflict of different views may contribute to a scientific development. The consensus discussion between homeopathy and conventional western medicine may thus lead to an extension and deepening of the medical ideas of man.

Limitations of the critics

The logical “context of justification” of natural science is only valid within the system of thought of the natural sciences and is not applicable to other sciences. This limitation¹³ of natural science is often ignored by the critics. Moreover, the scientific approach of natural science does not allow a sufficient explanation of homeopathy and this leads – if the natural science and conventional western medicine are considered as the only relevant system of thought – into the blindness of “narrow-mindedness.”

Such kinds of “wrestling with limitations” of rationalism or theology against other forms of science bypass homeopathy. This means that the criticisms deriving from the conventional western medicine, pharmacology, natural science and religion, as quoted in the first three parts of this series of articles, therefore primarily results from their own perception. This criticism disregards the medical and scientific foundations of homeopathy and therefore is not appropriate for the evaluation of homeopathy.

Limitations of the homeopaths

The same circumstances – as mentioned in connection with the critics – apply to the science of homeopathy. The homeopathic principles are only valid within the homeopathic system of thought. In case these limitations are neglected and the homeopathic system of thought is considered as the only right way of perception, or the research on the scientific foundations of homeopathy is omitted, the homeopaths are falling into their potential “gullibility”.

What are the limitations of homeopaths? There are philosophical, esoteric, magical and spiritual statements to “explain” homeopathy, with neither historical nor scientific foundations. The connection of homeopathy with fairy tales, myths, signature teachings, anthroposophy, Bach flowers and energetic, as well as mixing homeopathy with psychology, parapsychology, astrology, shamanism, occultism and spiritual healing must be avoided. Homeopathy should be taught and presented on its own medical foundations. This consensus within the “homeopathic community” is needed for positioning homeopathy on a modern academic level. Thus, homeopathy will benefit from an enhanced public image as well as in academia and in the healthcare system, and the interests of homeopathy can be represented against critics and the “established” medicine in a serious manner.

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Friedrich Dellmour, medical doctor, homeopathic physician, chemical engineer. Since 1986, he is engaged in the research of the scientific foundations of homeopathy. He is the founder of the journal “Homeopathy in Austria” (1990). He was working as a research fellow of the Ludwig-Boltzmann-Institute for Homeopathy (Graz, Austria) and coordinator of the sub-committee Pharmacology, Materia Medica, and Pharmacopoeia of the European Committee for Homeopathy (ECH) in Brussels (1993-2000). Since 2008, he has developed a collection of arguments against wrong criticisms of homeopathy. Friedrich Dellmour heads the scientific department of the Austrian Association of Homeopathic Medicine (ÖGHM).

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Translation of the unaltered literature version with full bibliographical references of the article published in *Homöopathie in Österreich* 2009;4: 19-25.

Translated by Catrin Cordes, Dip Trans, MCIL (final), Myriam Mueller, RJSCH, PDhom (UK), Dipl. Math and Mag. (FH) Ulrike Bruckner.

Original German article (literature version):

www.homoeopathie.at/downloads/wissenschaft/Argumentarium_Teil3.pdf

Documentation of the project „Argumentation Criticism of Homeopathy” (“Argumentarium Homöopathie-Kritik”) of the Scientific Department of the Austrian Association of Homeopathic Medicine (ÖGHM).

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