The science of homeopathy

Two women are on a bus, talking.

First woman: "What happened with that homeopath you were seeing?"

Second woman :"Nothing. She gave me a couple of pills but they didn't do anything."

"So who are you seeing now?"

"Oh – nobody. A few weeks later the problem just went away."

Anon: Joke enjoyed by homeopaths

Any sufficiently advanced technology is indistinguishable from magic

Arthur C Clarke

Magical thinking is the most advanced technology we have.

Jon Freeman

Theme

In this chapter we use homeopathy as an illustration of the scientific method as applied in alternative healing, and show the way in which its systematic study has revealed various aspects of the connected world that we are describing. Homeopathy shows the effects of informational relationships in a very distinct way. It also provides evidence that there are aspects of that information flow which should influence our perception of what happens between one generation of humans and the next, that there is more than simple genetics involved.

There has been laboratory proof of the way in which homeopathy works – proof which has been not simply ignored, but suppressed in a quite unscientific way. This has allowed the myth that homeopathy operates through the "placebo effect" to perpetuate. While the placebo effect tells us something important which science also is unable to explain adequately, it has nothing whatsoever to do with homeopathic effectiveness.

How homeopathy developed

Homeopathy is a science. Many other complementary health practices might say the same, but homeopathy is possibly unique in having developed explicitly according to western scientific methods prior to 1900. This is one reason we will concentrate on it at the expense of other strong contenders such as Chinese medicine and acupuncture which, regardless of their millennia of practice and huge curative history, are more difficult to frame in western terms. The other reason for a focus on homeopathy is that it illustrates perfectly the nature of the universe we are describing and exposes the gaps in the scientism paradigm.

We will use the term medical here to denote the core of pharmacologically and surgically based western Medical practice. This is not to deny that complementary therapies are also medical – it is simply a narrative convenience.

A convention has developed among the medical and scientism advocates in their references to homeopathy. That convention is to dismiss its practice in a very simple way. They note that its principle is to use remedies prepared in such a way that potentially there may be not one single molecule of the original substance from which the remedy derives, present in the pill taken by the patient. By this simple logic, Medicine takes the right to attribute all experiences to the "placebo" effect. What they mean by this is that the patient "imagines themselves better" because they are made to feel good. We will show that the notion and implications of the placebo effect are important, but not applicable to homeopathic treatment.

This convention has been present for so long and is so entrenched that it is largely taken for granted that no further study of its theory or history is necessary, creating a conspiracy of ignorance. Such trials as are undertaken are not conclusive. Often this is for methodological reasons we will examine below. On Page 167 of the "God Delusion" Professor Dawkins echoes the conventional viewpoint, which he repeats regularly in hostile TV polemics and one suspects, as with all his co-conspirators, that he has not been willing to look any further. In most cases we simply disagree with his views of science. In this instance it is fair to accuse him of inadequate research.

At this point let us remind ourselves of what the fundamental principles of science are supposed to be. A simple view is that science is the search for one kind of truth about the universe. Scientists might say that this method is the only way to determine truth. Such truth would be based on a straightforward set of processes.

- Observe the nature of the world with detailed care.
- To the greatest possible extent, undertake such observations in such a way that they can be measured and repeated by others under the same conditions.
- Try, when measuring and compiling the data, to avoid interfering with the subject under examination in such a way as to distort the events observed.
- From these observations attempt to formulate theories which would explain the relationships of cause and effect that determine what is seen.

For example: "I release an object at height. It falls to the ground. Therefore there is a force which operates on objects. I will name it 'gravity'." This is the background to the image of Newton's stroke of genius under the apple tree. Theories can develop to greater complexity such that we can then measure and determine mathematically just how strong earthly gravity is, how quickly a falling object will accelerate towards the ground, and what the effect might be of resistance to that motion from the air such that feathers fall more slowly. Further theories might

then develop regarding why it is that the Earth exhibits a property such as gravity and explanations would appear for the observed motions of the planets.

Depending on the phenomena observed, we would then repeat the observations under controlled conditions in order to test the theory and determine as completely as possible the boundaries of the theory. Is it always true? Under what circumstances does that theory vary, and how?

At the core, this is what science is – an attempt to create systematic processes for describing the observed world in a way which can be labeled as "truth". The process is simple in theory but due to the great complexity of the world the practice is not easy. Science has grown because a theory (e.g. Newtonian gravitational mechanics) was insufficient to explain why light bends and does not always travel in straight lines so that it is distorted when under the influence of gravity from large objects in the universe. A new theory is required and Einstein finds curves in space-time (don't worry – we don't need to understand that here).

The example above illustrates the requirement for science to change when new facts emerge. There is a linguistic misunderstanding over the phrase "the exception proves the rule" because we hear the modern meaning of the word "proves" as "shows it to be true". The original meaning of "prove" was "test". Thus, if a new and exceptional fact emerges (e.g. we notice conditions under which light bends) we test if the rules of Newtonian mechanics still apply. Depending on circumstances, we must either find a bigger theory in which our current theory is seen as a local approximation, or we have to throw the theory out and find a better one.

Forgive us if we are labouring this point. To do so would be insulting to scientists in particular were it not for the tendency through history for them to behave in fallibly human ways or to be influenced by political and economic forces. Ask Galileo. Science has regularly experienced the cycle of influence when a new fact emerges that does not fit with previous accepted theory. The fact in question is then denied by scientific authority. There is then a prolonged period of struggle (sometimes ending with the death of a particular authority figure) after which the fact is admitted and a new theory becomes authoritative. This has been neatly summed up by Schopenhauer who said :-

> "All Truth passes through three stages.
>
> It is ridiculed
>
> It is violently opposed
>
> It is seen as self-evident",

which brings us back to homeopathy, whose current scientific credibility, continues to lie between ridicule and opposition. Homeopaths must yearn for the day when the Earth will revolve around the sun.

Homeopathy's Galileo is Dr Samuel Hahnemann who was a physician and expert in pharmacology born in 1755, one of whose medical successes was to live to the age of 88. Hahnemann was by any standards a remarkable man, who was fluent in seven languages, and the initial prompting for his research came when he was translating the work of an English doctor,

William Cullen, into German.

He was unconvinced by a statement of Cullen's regarding the reasons behind the effectiveness of Cinchona bark as a treatment for malaria. In order to find out more about its properties, he took repeated doses of the substance, up to the point where its toxic effects began to show. What he noticed was that the toxic effects were fever, chills, and other malaria-like symptoms. From this he theorised that rather than being due to astringent properties, which Cinchona bark shared with other substances that were ineffective against malaria, the reason for its effectiveness was that the symptoms produced by the bark were similar to those of the disease. He set out to test this hypothesis systematically.

His method was scientific but since one observation does not make a science, Hahnemann spent the next six years, with the assistance of a small group of followers, testing the observation on a wide range of substances and conditions, using his family too as subjects. At the end of the process he published his findings in a medical journal. He immediately met with opposition, both from physicians, and from apothecaries. The latter were upset at the potential damage to their businesses, because Hahnemann recommended only one medicine at a time, and in small quantities, so were not disposed to comply with his prescriptions. When Hahnemann found that homeopathic medicines were not being prepared correctly by apothecaries, or that they were taking it on themselves to prescribe different medicines, he began to do the preparation himself. This was unlawful, and resulted in his being charged, and forced to leave his home in Leipzig.

It is perhaps helpful to see homeopathy against the background of its day, when treatments were very coarse - bloodletting and the use of leeches being among the common techniques. It is recorded that in 1833, 41 million leeches were imported into France. Orthodox medicine also used preparations from arsenic, lead and mercury - all poisons, as well as strong herbal purgatives. But despite this it was homeopathy that was labeled as "devilish", "cultish", or "quackery".

Like cures like

The first principle discovered by Hahnemann, and the foundation of homeopathy, stemmed from the initial observation, and can be summarised as follows:-

- Every pharmacologically active substance produces symptoms in a healthy, sensitive individual which are characteristic of that substance.
- Each disease has a characteristic set of symptoms.
- An illness can be cured by administering to a patient a small, homeopathically prepared dose of the same substance which, during trials, produced symptoms similar to the illness in healthy individuals.

His approach to treatment represented a dramatic move away from the established method. Allopaths (conventional medics) establish the existence of a particular disease, clarify its symptoms, and then test the effectiveness of various medicines on it by the use of substances that

oppose the symptom(s), a principle of “opposite suffering”. An illness accompanied by fever and diarrhoea, for example, would call for the combined use of substances that calm the fever and others that normally constipate, and so in a crude way, a total balance would be found by using a number of appropriate medicines together.

Homeopaths tried the opposite approach: first build a repertory of substances for medicinal use, they said, by giving them to healthy volunteers, and carefully noting the symptoms produced. Then use small quantities of the substance which produces the correct combination of symptoms as the single medicinal agent for those with disease conditions, a principle of “similar suffering”. To use a substance which potentially produces, rather than suppresses the symptoms seems at first counter-intuitive, but was found to work in practice. A simple example of the principle that "like cures like", would be that if you were suffering from the particular type of cold symptoms combining streaming and burning nose, watering eyes and bouts of sneezing, the remedy to be used would be derived from onions, which as any cook knows, produces the same symptoms. Likewise Allium Cepa, the remedy referred to, is used to combat hay-fever with similar presenting symptoms. The cause of those symptoms is not necessarily relevant. The fact that one may be caused by a viral or bacterial pathogen, and the other by an airborne irritant does not matter, because the body is seen to mobilise the appropriate curative resources when its energy is stimulated by the remedy to fully engage.

Returning to Hahnemann, in the six years of work before publication, many examples of this process were collected. In doing so he set a further fundamental principle in the development of the science of homeopathy; it should be based on detailed observation, extensive trials, and systematic testing of theoretical and philosophical ideas, through careful experimentation. This tradition thus meets the criteria described earlier for a scientific process and continues to the present day.

Homeopathy was successful, and spread rapidly. It was taken to America in 1825, and expanded so rapidly that in 1844 the first national medical association was formed, by Homeopaths. Two years later the American Medical Association was started with the specific intent of slowing the growth of homeopathy. The AMA specifically excluded homeopaths from membership, and expelled members who admitted any contact with it (which in many states was a precursor to loss of license to practice).

Nevertheless, the rapid spread of the science had the beneficial consequence that there were many practitioners, and a vast body of growing validation of its effectiveness. A second effect of this growth in numbers was that many practitioners were formulating, sharing and testing new theories (as too was Hahnemann, who remained active throughout his long life). As a result the body of information and experience as well as the recognised range of effective remedies, increased steadily. We want to stress here, that the point of this chapter is not to compare levels of homeopathic effectiveness with that of modern medicine. It is not a question of which is better. Our point is firstly to show that the principles discovered by Hahnemann and his followers were real and scientific and that there are sound reasons why homeopathy is effective. It is secondly to show the implications that this has for current scientific thinking.

Less is more

Having established the first principle, Hahnemann's second line of investigation was to determine what amount of the "similar" agent would be required to bring about the best curative effect. Some of the patterns in disease resemble the actions of seriously dangerous toxins. For example the sickness and diarrhoea that occur with food poisoning are sometimes like the effects of arsenical poisoning. It is obviously desirable that only the smallest quantities of arsenic would be used in treatment.

This line of research led to the second counter-intuitive finding. Just as it was better not to suppress the symptom with an opposite, Hahnemann discovered that the less of a substance he administered, the more effective would be the cure. His second axiom for treatment is the Law of the Minimal Dose. This states that the effective dose for a disorder is the minimum amount necessary to produce a response. The process by which a homeopathic remedy is prepared is known as potentisation, and involves a sequence of progressive dilution and a rhythmic shaking, termed succussion. In a typical method, one part of the source substance is added to 9 parts of water and shaken rhythmically. This is known as a 1x (decimal) dilution, or 1 part in 10. One part of this is then taken and added to another 9 parts of water, again succussed, to give a 2x dilution, or 1 part in 100.

These dilutions can be repeated a large number of times. A typical UK health-store remedy might be 6x (or 1 part in a million). But it might also be 6c, a centessimal (1 to 100) preparation where the original substance is diluted to one in a billion levels. Practitioners often use dilutions down to one in a trillion and well beyond. While the toxicity of such medicines is obviously very low, the dilutions quickly approach levels where it is doubtful whether a single molecule of the original substance remains. This is the cause for the chemical reality which underlies the "placebo effect" dismissal.

There is more to reveal about the findings of homeopathy and its scientific implications, but it would be good to get the "placebo" issue thoroughly out of the way. While it might be apparent to an open-minded reader that the founding processes are so detailed as to make the placebo theory inadequate, there are many more facts which support the case for homeopathic effectiveness.

The placebo myth

One simple fact giving lie to any psychosomatic effects is that homeopathy works with infants and animals. The numbers of parents who have experienced the almost miraculous effects of chamomile in homeopathic potencies in calming their teething infants probably amounts by now to millions. This could be enough on its own, but it is far from being an isolated example.

Jon has practiced homeopathy as an amateur for over 20 years now with friends, family and pets. In his early days he visited with friends whose small cat had suffered for days with worsening symptoms of sneezing, runny nose and wheezing. Cat-lovers will know that this can be quite serious – more so than a human cold – and the hosts (you can't "own" a cat) were getting

worried. They gave permission that evening for Jon to experiment, despite his never previously having treated any animal. A few remedies were placed in the cat's food and water and by the following morning all symptoms had vanished.

If this was a one-off occurrence it could be regarded as coincidence, but it is not and there are homeopaths who specialize in veterinary practice. What it emphatically cannot be ascribed to is a placebo effect. It is even less appropriate than with infants to apply such a term.

There is strong epidemiological evidence too. In 1830 cholera, a disease that had never been seen before in Europe, was having devastating effects all across it. Nowadays it would be controlled by hygiene and by preventing diarrhoea and dehydration but even now if cholera occurs in an unprepared community, case-fatality rates may be as high as 50% according to World Health Organisation figures -- usually because there are no facilities for treatment, or because treatment is given too late. In 1832, two hundred and fifteen deaths occurred in Sunderland alone, and by the summer of that year the disease had taken toll of some eight hundred lives in nearby Newcastle-upon-Tyne. From North-East England the disease quickly spread to Southern Scotland causing three thousand one hundred and sixty-six deaths in Glasgow. In April the disease appeared in Hull and in Liverpool where one thousand five hundred and twenty-three deaths occurred. Leeds, Bristol, and Manchester were also soon afflicted as well as many other towns and sea-ports, the disease being especially rampant amid the shacks and hovels of the new industrial districts.

At the same time the Russian Consul General reported results from homeopathic treatment practised at two locations. Of 70 cases, all were cured. In 1849 Cholera had reached America, and an outbreak in Cincinatti was treated similarly, with a 97% cure rate in a sample of 1116 patients. In 1854, cholera broke out again in London. At the London Hospital where homeopathy was used, returns gave 61 cases of cholera with 10 deaths (83% cured), and 341 cases of choleraic diarrhoea with one death (99% cured). In contrast the neighbouring Middlesex Hospital received 231 cases of cholera and 47 cases of choleraic diarrhœa. Of the cholera patients treated conventionally 123 died, a fatality rate of 53.2 per cent.

When doctors could not cure the disease they attempted to treat the wound to their professional pride. The homeopathic cases were excluded from statistics presented to parliament due to the claim that they would give "an unjustifiable sanction to an empirical practice alike opposed to the maintenance of truth and to the progress of science". (Evidence of the Medical committee to the Parliamentary Board of Health).

The same year in Naples, a Dr Rubini treated 225 cholera cases without a single death. At this time the success of allopathic medicine was generally no better than one in three patients cured. Similar effectiveness was reported later in the century, for treatment of a Yellow fever epidemic in the Southern USA.

We said earlier that the effectiveness of homeopathy against cholera was important in itself, and not as a comparison with antibiotics, or any modern medical procedure. The importance is that you cannot conceivably achieve a 90% cure rate for as hostile a disease as Cholera with a

placebo effect, or other treatments would have been able to do so as well. It is clearly quite ludicrous to dismiss homeopathic results in this way. There has to be a better explanation and indeed there is one, which takes us back to the theory.

Small doses stimulate

In conventional pharmacology, one of the basic tools is the Dose-Response curve. This graph illustrates one of the rules of thumb in drug use: that an increased dose of drug will give an increased effect. But this applies only at higher dosages. One of the very earliest laws of pharmacology, known as the Arndt-Schulz Law also expresses the homeopathic effect. Formulated by Arndt in 1888, the law states that for every substance, small doses stimulate, moderate doses inhibit, and large doses kill. Allopathic medicines, with their emphasis on moderate drug doses, work in the inhibitory part of the scale, and are used to suppress symptoms. Homeopathic medicine, on the other hand, begins at the stimulatory end of the curve, and moves to smaller and smaller dose ranges. Its emphasis is on the stimulation of the body's natural response mechanisms.

But although the basis is there in pharmacological theory, we must go beyond pharmacological action to understand the homeopathic effect. Since there is often insufficient substance to have a pharmacological effect, the action has to be taking place at some kind of “energetic” or “informational” level. We accept the statement from critics that there may not be a molecule of the source substance present. It is clear that the effectiveness of homeopathy does not lie in chemical action or conventional pharmacology. Equally clearly, it has great capability to be selective and specific about the effectiveness of different substances, or their actions would not be so precisely targeted. This is the first of our observations regarding the validation that homeopathic theory gives to the transmission of a healing effect through a medium which is purely “energetic” or “informational”. We will add more definition to these terms shortly.

By now you will hopefully be recognizing the fundamental reason for our earlier focus on scientific principle.

- Something is happening in homeopathy that is scientifically backed by volumes of systematic evidence gathering but which does not fit with existing medical theory.
- Since the existing theory is failing some tests of evidence the theoretical model needs either to expand or to be replaced.
- In order to develop a more comprehensive theory further investigation is required into the data and the underlying principles of similarity and minimum dosage

Fortunately there is more evidence for us to look at. Unfortunately medicine and science are in a state of denial (ridicule and opposition) around this too. They have cause to do so because the evidence strikes at the very roots of the errors which we listed in our introduction. But the alternative theories which emerge from this evidence are very exciting indeed.

Suppression doesn't work

As we delve more deeply into what homeopathy has discovered, the evidence throws up yet more challenges to scientific theories, and in some very interesting ways. We are going to have to abbreviate a lot more of the theory to get to this. There is so much of value regarding the way in which healing works, and we can only encourage you to read of it elsewhere (the work of Deepak Chopra being one excellent example).

We referred above to the choice allopathic medicine makes to cure by suppression of symptoms. Most alternative and holistic approaches are fundamentally opposite to this. There is a basic respect for the actions of the body - an assumption that if the body produces fever, it is because it needs to do so. This approach is inclined towards supporting the body in its natural response and views suppression as likely to drive fundamental causes of ill health deeper into the body, bringing worse trouble later on. In homeopathy the use of a substance that shares the underlying symptomatic signature (similar suffering) is designed to propel the symptom(s) to completion.

Examples of the ill effects of suppression form a very strong part of homeopathic case lore. A whole strand of investigation in homeopathy relates to the situation where actions that were taken to suppress a disease result in the later appearance of another symptom pattern. These new symptoms can then be alleviated by applying the treatment appropriate not to the new symptoms, but to the disease that was originally suppressed. This is shown to be effective no matter how long before the current problem it may have occurred, or how absent those original symptoms may be.

A typical example of this which occurred frequently during the 19th century, when the development of homeopathy was at its height and when venereal disease was also very common, arose from the treatments used to suppress Gonorrhea. The case we use to illustrate this dates back to 1875, when the eminent homeopath concerned was treating a man of 60 for an obstinate case of rheumatism. This patient was walking with a cane, wrapped in a muffler, thin, bent and aged in appearance, and his condition had persisted for several months. Unable to shift the problem with remedies conforming to the current symptoms, the homeopath recalled the correspondence that had frequently been observed by him and his colleagues, between arthritic conditions and earlier treatments to suppress gonorrhea. His insight was to treat the patient with the remedy derived from that disease. The case notes describe that the patient returned ten days later feeling well, and that within the month he had ceased use of the cane and muffler. His weight subsequently increased from 140 pounds to his previously healthy 212 pounds.

Although this example illustrates powerfully why homeopaths and other alternative practitioners are so concerned to bring disease out of the body, rather than push it deeper in by suppressing symptoms, that is still not the main point of the story. There is a further and even more remarkable stage to go yet. It was also consistently observed by homeopaths that the effect we have just described could span the generations. That is, an individual could present the symptoms of rheumatic disease, and that this could be cured by the gonorrheal remedy, even though the case of suppressive treatment had occurred in a parent. What this means is that there is experience in homeopathy that the energy pattern relating to a disease can pass from generation

to generation, and that the inheritance can be treated. This observation has huge significance. For the avoidance of any doubt we must stress that according to accepted theories this inheritance cannot occur by way of the genes and has no known alternative scientific explanation. It clearly needs one. We will examine this area extensively when we get to grips with the true mechanics of genetic processes.

Energy sickness down the generations

In fact this understanding is one of the basic strands of homeopathic science, which recognises that there are certain diseases, such as Tuberculosis, Gonorrhea and Syphilis which have widespread influence through inheritance. That is, they are so embedded energetically and informationally in the human race that their influence may be detected several generations beyond the last known experience of the disease in the person's lineage. A modern homeopath might rarely encounter a patient who knows the last time tuberculosis or syphilis occurred in his or her family, but it is nevertheless frequently an element in that individuals "make-up". Homeopaths call such an energetic lineage a "miasm". Treatment of miasms is a strong part of a practitioner's armoury, deeply validated by practical experience.

So now we have a second instance whereby some sort of energy is perceived as being transferred, without any known mechanism. It is not being suggested that the miasm is passed via the DNA, or that it has been incorporated into the genes. So just as in some way, the energy of a substance can be put into the fluid that is used to impregnate a homeopathic tablet, the energy of a disease can be passed - perhaps in the cytoplasm of a sperm or egg cell - from one generation to the next. The implications of this fact (and I repeat that homeopaths have been healing people on this principle for a very long time) are profound. This means of transmission implies the strong influence of a vibrational or information-carrying energy component in the disease, and on its passage between generations. We cannot over-emphasise the significance of this fact. In case minds are beginning to wilt in face of the apparent improbability of the facts being described, we also have to repeat the statement that these facts have been repeatedly validated through systematic observation by multiple practitioners across several continents and over very many decades.

The laboratory evidence

Clearly some aspects of these effects are not suitable for laboratory examination. We cannot deliberately infect patients with gonorrhea and then manipulate their treatments for the purposes of measurement, still less monitor the effects on their children. But there is scientific evidence in the laboratory of a means for this transmission to take place. It was discovered by Jacques Benveniste, when he was director of the French National Institute of Health and Medical Research and specialist in immunology. The evidence demonstrates a phenomenon known as "molecular memory". This is akin to a kind of subtle electromagnetic language, whereby the "sound" of one molecule could be recorded by another, like a tape-recorded sound. Benveniste's research was first reported in the magazine "Nature" (Vol. 333, No. 6176, pp. 816-818, 30th June, 1988). Benveniste had taken a substance which typically produces the chemical activity

associated with allergic reactions when mixed in a test-tube, with a blood serum preparation. He diluted the substance tenfold, and repeated the experiment. He continued this process repeatedly, and as with homeopathy, progressed way beyond the level where any molecule of the substance remained. In effect his solution was just distilled water, containing in theory, 1 part of the original antibody to 10^{120} parts of water. (10 followed by 120 zeroes - a trillion multiplied by a trillion repeated ten times). The effect on the blood serum persisted regardless.

This experiment was replicated in Jerusalem, Toronto and Milan with the same results, and his paper was signed by twelve other researchers. This should have been hailed as revolutionary and groundbreaking. Even now it should be seen as hugely significant for scientific theory. At the very least its results give considerable credence to all that Hahnemann and his followers had discovered in practice, but the implications go much further – right through medicine and biology. Instead of hailing the research the medical and scientific establishment treated the results as a problem, one reminiscent of an anonymous poem which runs "Last night when walking up the stair, I met a man who wasn't there. He wasn't there again today - I wish, I wish he'd go away." This is very much the response that Benveniste's work has met with.

The poem's last line may also be substituted with "I think he's from the CIA". It can be risky to challenge authority, and the attacks on Benveniste in the years since have been outstanding in their abusiveness, including Nature's choice to send its editor and two "fraudbusters" to Benveniste's laboratories. One of these was the noted stage magician James Randi, an arch-skeptic whose name appears regularly as a "debunker" of alternatives and who was reported to have taped information to the ceiling "to prevent tampering". Benveniste complained that the process was unprofessional, accused the team of poor controls and of using one week's work to wipe out the activities of five years research in his and five other laboratories. The results Benveniste obtained in their presence were mixed, and inconclusive, with the first three trials providing some confirmation, but a further four showing nothing.

There are many subsequent failures to replicate the original work but there was a notable success in 2004 when Madeleine Ennis, who claimed to have begun as a skeptic published a study which stated "it has been shown that high dilutions of histamine may indeed exert an effect on basophil activity". (Inflammation Research 2004: 53; 181-188). Such mixed evidence is unhelpful but who knows what happens with such subtle energies, especially in such an environment as the chaotic Nature investigation and under such stress and hostility. If there is a relationship between thought and energy such as we are suggesting, then confusion is exactly what you would expect from this scenario. One clear result was that Benveniste was hounded from the scientific fraternity. He died in 2004 following heart surgery.

English researcher Cyril Smith has also demonstrated the ability of water to store electromagnetic frequencies, and French physicist Michel Schiff likewise participated in replications of the experiments and in his book "the Memory of Water", acknowledges that the water memory effect does seem to occur. Despite the totally central role of water both biologically, and at a planetary level, there remain many properties of water that are not understood. Those who want to know more might care to look into the work of Viktor

Schauberger. A further source of wonder comes from those such as Masaro Emotu, who has photographed the Benveniste effect. You can see examples at www.hado.net .

As far as homeopathy is concerned, we repeat once again that the effects we are describing are consistent, and have been repeatedly observed for over a century. It is frustrating to continue to read material that speaks of homeopathy as unvalidated. This is completely untrue, it is simply that the evidence is being ignored or misrepresented, and the mythology passed on in medical schools. The consistency and volume of evidence inside the homeopathic world has been developed over two centuries and could only be denied by those who have not actually read it. People's lives and health are at stake, because we are not making full use of the healing techniques that are at humanity's disposal. We feel it appropriate to issue a challenge to science and medicine: put the same degree of funding and constructive open-minded effort into the investigation of the theories described here, and refrain from attack until an adequate alternative explanation is on offer. Such would be a genuinely scientific response.

Our explanation follows a pattern that will now be familiar to readers. We are giving consistent evidence that there are phenomena occurring which could take place only through some kind of transmission of information. That information has to be specific enough to convey the characteristics of a molecule even when that molecule is chemically absent. It has to be specific enough to convey the characteristics of a disease pattern (or at least of the triggers it provides to the body) such that the "picture" of suppressed gonorrhea, or the "picture" of family tuberculosis can travel down the generations. This requires an informational content that is both complex and subtle. That it persists at all speaks of its power. That it is so hard to detect the mechanism speaks of something that is not visible to our normal processes of investigation. In these features it corresponds deeply with the nature of a spiritual reality, of a pervading consciousness. This is our explanation, it is the one which is consistent with the other phenomena described in this book and the one which corresponds with the varied aspects of human experience usually described as "spiritual".

Why science often can't find the evidence

A typical example of the debate over homeopathy recently took place on the BBC "Today" program, (23/05/07). On one side was Ray Tallis, a Professor of Geriatric medicine who is attempting to persuade UK NHS Trusts to abandon their co-operation with homeopaths. On the other was Peter Fisher, the Clinical Director of the Royal Homeopathic Hospital. Ray Tallis claimed that the "authoritative reviews" of published studies on the efficacy of homeopathy conclude that there is no proof of any benefit. He further described homeopathy as an example of "magical thinking" because the basis on which remedies operate is "impossible". In contradiction to this, Peter Fisher cited other reviews showing value from Homeopathy, in particular citing the views of the major health insurers in Germany – the "Krankenkasse" – that homeopathy is adding benefit and proving cost-effective.

This debate exemplified the prejudices and lack of understanding we have just examined, but we must to deal explicitly with the issue of "experimental evidence" and of adequate design.

Scientific experiments aim to isolate phenomena. They therefore work best in simple scenarios and are well suited to a situation such as that pertaining to drug-testing. In such tests a set of people with a single condition are tested against a single pharmacological substance. Usually this is conducted in such a way that some people get the drug, some a placebo, and that neither subject nor experimenter know who is getting what. This is known as double-blind placebo control.

Homeopathic remedies are not drugs. They are informational stimuli which promote reactions of self-healing by the body. They are not selected by homeopaths on the basis of correspondence to a disease diagnosis, but on the symptom pattern. One disease may manifest with different patterns in different individuals and be treated with different remedies. Also, homeopaths would often not administer just one remedy because they are treating the individual holistically over a period of time. This means they would be administering other remedies which support the patient constitutionally or which deal with the underlying conditions that are seen, based on personal and family history, as antecedents to the currently presenting symptoms.

This complex and holistic approach does not fit the experimental methodology that medicine currently regards as scientific. In fact it is notable that when discussing the evidence, the anti-homeopathy camp cites those studies which show positive benefit as being those which have the greatest weaknesses in methodology.

This sets up a situation where it is likely to be very difficult, or even impossible, for homeopathic medicine to be evaluated on anything like a level playing-field. Science is making the rules, and the homeopathic approach does not fit those rules. It goes to the heart of the case we are making – that the scientific model breaks down in these areas.

It is also appropriate to take more note of the issue of "placebo effect". The homeopathic effect is distinct from a placebo result because it is highly specific in the information that it carries. But since the effect is mediated through the bodymind response to the remedy stimulus, there is no way in which to distinguish it from a placebo effect. They look the same from the outside, just as from the ground it appears as if the sun orbits the earth. The evidence comes from cumulative health improvement and there is no means by which to demonstrate beyond doubt that the patient could not have healed spontaneously. In the complementary medical world, all healing is self-healing. That's the whole idea! It's a model of health creation, not of disease control.

The mere existence of the placebo effect speaks volumes regarding the relationship of mind and body in health and healing. It goes to the heart of the very relationships which complementary medicines work with and which science would like to convince us do not exist. Conventional medicine cannot explain the placebo effect – it has no model adequate to accomplish this. The perverse consequence of this is that rather than investigating an obviously powerful phenomenon, science works hard to eliminate it from all research. The recent advances in neuro-endocrine immunology have been showing science the way out of this cul-de-sac, but to date these advances are under the same pressures as homeopathy and the medical community as a whole has yet to embrace them fully.

The writer who conceived the idea of communications satellites, Dr Arthur C. Clarke notably said “Any sufficiently advanced technology is indistinguishable from magic”. From our point of view, homeopathy is a technology which is in advance of scientific understanding – it is inevitable that they will label it as magic. But the use of the word “magic” in public debate is more corrosive because it is intended to imply naivety and gullibility on the part of homeopaths and patients. It is a subtle but deep insult.

As we have pointed out, there are experiments which show the “molecular memory” effect in water. We believe that these were done reliably by Jacques Benveniste and reproduced by several others, despite being extremely subtle. The work of Candace Pert and others described earlier underpins many of the relationships that are involved within the body (or bodymind). Generations of homeopaths, complementary practitioners and their patients, work daily with the evidence in systematic ways which conform to scientific principles, even if not to scientific “knowledge”. They are not gullible or deluded and it is time that they ceased to be treated as such.

But there is one more aspect to the experimental evidence which we must address. You are by now becoming familiar with the connected world we are describing, one in which energy and information are communicated at all levels, through all types of organisms. You know of our view and of the evidence that the human mind has the capability to be a receiver and a transmitter, and that the homeopathic effect, like a hands-on healing, can be passed directly.

The implication of this for scientific experimentation is profound, and for the kinds of trials required to “prove” homeopathy it is catastrophic to scientific methodology. If the remedy can be transmitted to the patient by pure energy means, which includes the fact that the homeopath has it in his or her mind and might transmit it directly, there is no such thing as a placebo or a double-blind trial since all patients are receiving the remedy (at least in some measure). Equally, if the experiment is being run under conditions where actively hostile skeptics are involved, the energy effects from their thinking can also interfere with the outcomes. This could explain why those who initially replicated the Benveniste experiments were successful, and why later researchers with a less open mind-set were unable to achieve results.

Lastly, practitioners know that the engagement of the patient with their healing process contributes to its effectiveness. To describe this as a part of the placebo effect grossly oversimplifies the relationship and goes against the whole thread of neuro-endocrine immunology described earlier. The bodymind relationship is too subtle and complex for this. The patient is not a mechanical object. Any good doctor knows this. It is the pharmacological approach which drives the scientific model. This is not the place and we are not the people to lead discussions about conspiracy theories. But we would be naïve not to recognise that drug companies are there, that they are influential in research funding and wield enormous influence with huge amounts of money at stake. At the very least this has to be seen as creating massive inertia and pressure against the changes we are promoting.

Science is a powerful tool and its experimental methodology is very valuable in sifting truth and understanding underlying mechanisms. But in the area under discussion it is not effective. For

sure, we need to apply scientific understanding and analysis and to be systematic about our observations, which homeopathy does, and is. But the experimental tool is too primitive. The observer cannot be separated and the variables cannot be controlled. We would not use a chainsaw for brain surgery and we must recognise that there never will be an effective double-blind placebo trial proof for homeopathic healing. It's an inappropriate methodology. The healing processes described in the next chapter present even greater difficulty to science. They also take us back into the heart of the spiritual debate.

Review

The evidence from homeopathy fits centrally with all that we are saying. Homeopathy demonstrates:-

- A scientific and systematic gathering of evidence

- Epidemiological proof of effectiveness of remedies

- Consistent and specific relationship between substances and the conditions that they treat

- Transmission of a healing that is neither pharmacological nor a placebo effect

- Evidence of the passage of disease-related information across generations, not mediated by the genes

- The weakness of experimental approaches when dealing with alternative healing

- Dubious standards of scientific objectivity applied to its evaluation

The implications of these facts support the case that we are making for the types of connection and information carrying that we see as central to the science of spirituality and add another element to this consistent picture.