# Dowsing

Traditional dowsing is a method of locating underground water or minerals by the movement of a hand-held instrument, variously a pair of metal rods (L-rods), a forked stick (Y-rods) or a pendulum. Dowsing is also performed at a distance using a map or other representation to find information about missing objects or people. Formal experiments have been carried out since the late 1880s, and while theories concur that the ideomotor response accounts for the movement of the dowsing instrument, it remains to be established what triggers the response: whether a (possibly electromagnetic) force related to the object being sought, or a psychic (clairvoyant) transfer of information in the mind of the dowser, or a psychological response to environmental clues. Regardless of the mechanism, reports continue to emerge that water and mineral exploration companies benefit from employing dowsers.

## History

Activities comparable to modern-day dowsing are found in the early days of human history across a variety of cultures. However, the focus here is on the western history of dowsing, and while the traditional term *divining* is still sometimes used today, implying a possible supernatural element, the more neutral term *dowsing* is preferred.

The first printed description of dowsing rods being employed to find underground minerals is attributed to Georgius Agricol in *De Re Metallica* (1556) in relation to their use by miners in Germany.[1] This suggests it was considered a useful way to locate objects undiscoverable by the regular senses, but it was nevertheless controversial. At times the authorities utilized the skills of dowsers; at others they called it witchcraft and persecuted those who openly practised it.

For instance in France in the late 1600s a rural dowser, Jacques Aymar, helped trace the perpetrators of a murder using his dowsing skills. Following this he become the subject of experiments and was asked to assist other criminal investigations.[2] In contrast, earlier in that century, also in France, the Baron and Baroness de Beausolail, who had made a career out of dowsing on behalf of miners, fell foul of the civic authorities and died in prison having been charged with witchcraft (fortunately after having writing seminal books on dowsing).[3]

The first use of the word ‘dowse’ in print in English is attributed to the philosopher John Locke in a publication dated 1691.[4]The origins of the word are unknown with any certainty: competing theories postulate that it comes from the German *deuten* (‘show’, ‘indicate’, ‘point out’) or possibly from the old language of the Cornish, a form of Gaelic, in which *dewsys* (‘goddess’) and *rodhl* (‘tree branch’) combine to provide the words similar to what eventually would become in English ‘dowsing rod’.[5]

Dowsing continued to be used widely, especially in rural areas in Europe, and the precepts of dowsing were carried to the new world colonies, mainly as a method of finding water or underground minerals.

## Modern Day

Because dowsing dates back to the Middle Ages, it’s widely assumed that the practice is based on folklore and superstition, and lacks relevance to the modern day, when machines and remote-sensing instruments can perform the same activities more reliably. However, the modern era of dowsing – which can be said to have begun with the first scientific reports by the Society for

Psychical Research in the late 1880s – has seen the activity continuing to evolve as a practical and seemingly effective method of locating hidden materials.

The cost and effort involved in digging wells has meant that exactly where to dig, and the depth required, are valuable items of information. Underground water flows are difficult to predict from the topography of the landscape. That also applies to minerals. Mining exploration is expensive, even with modern equipment, so any supplementary information that can be obtained by cheap 'alternative' methods is sometimes considered helpful. More recently archeological artifacts have been the subject of dowsing.

# Dowsing Instruments

Experienced dowsers sometimes claim to feel physical effects occurring in their bodies that enable them to perform dowsing without an instrument. However, most dowsers rely on an instrument to alert them to the find.

### Forked Stick

The most common dowsing instrument is a Y-shaped twig or branch, traditionally hazel, although according to Agricola dowsers used different kinds of wood to search for different metals.[6] The stick would dip down towards the earth, or twist, indicating the presence of what was being sought.

### Metal Rods

Metal or wire rods in the shape of an 'L' are also used, one in each hand, grasped by the shorter section. The rods swing, point or cross over each other to indicate the presence of what is being sought.

### Pendulum

The use of a pendulum, a heavy, evenly-weighted object on the end of a string, is sometimes found in the field, but is more commonly associated with dowsing for information, over a map or in response to a question. Some dowsers find a correspondence between the length of the string and different compounds.

### Modern Equipment

In recent decades, there have been attempts to refine dowsing with equipment designed to give a stronger 'find' signal and other information, such as the Aurometre.[7]

# Theories

A common belief is that the use of a rod or other equipment amplifies unconscious hand movement, an ideomotor response. Another theory is that the instrument is moved by a force that emanates from the ground (perhaps electromagnetic). Map dowsers are thought to obtain information psychically, which is relayed unconsciously to the dowsing device by the movement of the hand.

Attempts have been made to determine whether the instrument can respond independently of the dowser. One such experiment, carried out in France in 1838, showed that the pendulum would swing when the relevant material was placed beneath it, even when not directly connected to the dowser.[8] In 1850 Rutter developed a 'magnetoscope', a contraption that allowed a pendulum to swing in a glass tube held aloft by a metal arm. This too appeared to eliminate ideomotor response as the sole mechanism.[9]

Debate regarding the various causes of movement of the dowsing implements continue today.

# Map Dowsing

Dowsing is also sometimes undertaken 'remotely', that is, at a distance from the place where the hidden element is sought, using a pendulum and a map. Map dowsing is most commonly used to locate missing persons or concealed archeological artefacts such as submerged wrecks. The dowser typically holds a pendulum over areas of the map in turn, and 'asks' whether the person or object is to be found there, eventually honing in to the likely location.

A well-known example was described by American psychotherapist Elizabeth Lloyd Mayer with regard to a musical instrument that had been stolen from a theatre in Oakland, California. Having failed to recover it through all normal channels, Mayer enlisted the services of a map dowser, Harold McCoy in Fayetteville, Arkansas. In an initial brief phone conversation he told her the instrument was still in Oakland. Then with the aid of a local map of the area, he identified the exact address, information that led directly to its recovery.[10]

# Evidence

Early experiments attempted to establish whether or not dowsing worked. However, because the purpose of dowsing is to find hidden items located over large areas of varied landscapes it is hard to replicate in a controlled environment.

A 1982 review of the experimental literature found that the investigative work that has been carried out into dowsing from a biophysical and physiological standpoint is 'promising but not totally compelling', and that considerably more work would be required to support the case that it is a psi process.[11]

Below is an outline of the main experiments that have been undertaken since the Society of Psychical Research instigated a review of the evidence for dowsing in the late 1880s.

## Late Nineteenth Century

A lengthy review of the evidence for dowsing was undertaken in the late 1880s on behalf of the Society for Psychical Research by William Barrett, professor of physics at the Royal College of Science in Dublin. Anecdotes by dowsers in Britain offer a snapshot of the activity during that period.[12] [13] To discover whether dowsing was a physical or psychical phenomenon, Barrett conducted experiments using targets such as radium salts and coins hidden from view of the dowser. His results indicated that dowsing could improve odds against chance guessing significantly, but the possible role of unconscious sensory cues was not ruled out.[14]

## Twentieth Century: Biophysical Research

Experimental research in the twentieth century focused on possible biophysical implications of activities associated with dowsing: the existence or otherwise of a force or field responsible for the effect on the dowser. Experiments also tried to determine whether successful dowsers possessed certain physical characteristics. Tests were undertaken to determine their sensitivity to magnetic fields and if they could detect different radio frequencies.[15] The results were inconclusive, although some indications emerged of an ability by dowsers to detect weak electromagnetic fields.[16]

## Twentieth Century: Physiological Research

Experiments to discover possible physiological processes have indicated that successful dowsers have a lower skin resistance among dowsers compared with the average population, also that dowsing with wet hands can improve results.[17]

Attempts have been made to identify the existence of dowsing 'sensors' in the body, and their location. Experiments in the 1970s used a high frequency generator which was randomly switched on or off as different parts of the dowser's body were shielded from the radiation while dowsing. The highly significant results, 694 trials with 661 hits and 33 misses, indicated that sensors in the body sensitive to electromagnetic fields might be located in the kidney, brain and pineal region.[18] [19]

## Hans-Dieter Betz

In the 1980s, researchers led by Hans-Dieter Betz, a geophysicist at the University of Munich, undertook field experiments to determine whether dowsing could be used in tandem with conventional methods to improve the accuracy of drilling for water.

The project involved exploring dry areas such as Kenya, Sinai and Niger, where there was a strong need to discover fresh sources, using experienced professional dowsers. The results achieved by one particularly successful individual, Hans Schröter, in more than one thousand drillings were closely examined by a team of geoscientists and showed an average success rate of above 80%.[20]

The abstract heading the first of two reports is as follows:

> This report presents new insights into an unconventional option of locating water reserves which relies on water dowsing. The effectiveness of this method is still rightly disputed. Now, however, extensive field studies – in line with provable and reliable historic accounts – have shown that a few carefully selected dowsers are certainly able to detect faults, fissures and fractures with relative alacrity and surprising accuracy in areas with, say, crystalline or limestone bedrock.
>
> A series of Deutsche Gesellschaft fur Technische Zusammenarbeit (GTZ) projects involving this technique were carried out in dry zones with unexpectedly high rates of success. In particular, it was possible to locate a large number of relatively small underground aquifers in thinly populated areas and to drill wells at the sites where water is needed; the yields were low but sufficient for hand-pump operation throughout the year. Finding or locating a sufficient number of relatively small fracture zones using conventional techniques would have required a far greater work input.
>
> The relevance of the method used was tested under various aspects. On the one hand, project areas with different geological characteristics were chosen and, on the other hand, the relevant circumstances and project results were carefully examined by geology experts. So far, neither critical consideration of all possible objections nor attempts at reasoning have yielded a conventional explanation for the persistent success of the dowsing technique – an outcome which has been corroborated by a number of specifically designed control experiments and comparative tests.
>
> The trend of the reported findings is concordant with that exhibited by the findings from recent scientific research carried out, for example, by a Swedish geological institution and universities in Munich. Provided that certain conditions are met, the results obtained show the dowsing technique to be a serious alternative for groundwater prospecting.
>
> It can thus be concluded from these present experiences that the effectiveness of locating ground water in certain hydrogeological situations could be raised significantly if

> conventionally organized operating teams were to make additional use of appropriately tested and selected dowsers in order to pinpoint drilling spots.[21]

The experiments also indicated that dowsers can sometimes provide additional information about the water flow, such as how far drillers need to dig, and, on one occasion, whether the water was drinkable.[22]

In the second part of the study, Betz describes three dowsers in Germany who were reliably successful in revealing viable water sources in drilling projects.

**E Kittemann** This dowser, active for decades in southern Germany, is said to have an almost complete record of success.[23] In one especially noteworthy case, Kittemann located a mineral water source in Tegernsee, locating a drilling point with indications of depth and mineral composition, which although considered extremely improbable by conventional calculations, were confirmed when drilling eventually took place.

**I Gronig** Claims of success by Gronig are endorsed by a long-term geoscientific study carried out at the University of Bonn. Details are given of successful use of dowsing to indicate exact depth, quantity and quality of the water she detects.[24] Betz records:

> In the village of Einbeck she succeeded in making exact and useful predictions for three drillings ordered by the city. For the first case, she predicted water at depths of 100, 160 and 230 m with a yield of more than 30 1/sec. A 174 long term pump test actually yielded some 28 1/sec at a depth of 230 m. In order to increase the yield further, the responsible geological state office proposed to deepen the borehole; Mrs. Gronig, though, denied the usefulness of such an action. In fact, deepening to 314 m did not lead to any increase of the water quantity. For the second drilling, she predicted a yield of 26 1/sec at a depth of 113 m; an artesian spring with 25 1/sec appeared at 115 m; pumping at ground level delivered at least 70 1/sec. For the third case, the prognosis was 29 1/sec at 180 m; the actual drilling to 240 m provided 33 1/sec.[25]

**K. Isken** K. Isken, active since the 1980s, cooperated with a deep drilling company. Unusually, he guaranteed success, making no charge when the water yield was found to lie below his predicted minimum. In a 1991 case, the authorities of a small town in southern Germany required a new water well, with specific yield and low nitrate quantities. Three previous drillings based on extensive geological surveys had failed. Isken identified a spot, and in a comparison test the same spot was independently indicated by Hans Schröter, without previous knowledge of Isken's activity. Drilling at the spot resulted in a higher yield of good quality drinking water.[26]

## Controlled Experiments

Laboratory experiments, described in the second study, proved less successful. Betz reports on a double blind experiment set up in a barn, in which dowsers on the first floor attempted to locate the position of water pipes that had been laid in randomly chosen positions on the ground floor, repeating the process after the position of the pipes was changed, again according to a random process. In 900 individual tests arranged in 107 series, undertaken by 43 persons, the results were generally at chance, although a few individual scores were significant or highly significant.[27]

A second experiment used walkways in a field, in which the dowsers were blindfolded and precautions were taken to counter clues given by wind, temperature, smell and other effects. Forty persons were tested with 3000 individual experiments, of which only thirteen produced significant results, although eight were highly significant, and most of the latter could reproduce them. The most successful individual was Hans Schröter.[28]

## Skepticism

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### James Randi

Stage magician James Randi describes a test in which four applicants for his cash reward attempted to dowse for running water, placing pegs over the route of buried pipes. None succeeded, and the experiment is often cited as having demolished dowsing claims.[29] Critics have countered that this was not a scientific experiment, as no statistical evaluation was possible and the placement of the pegs could not be accurately evaluated.[30]

### Jim Enright

Betz's barn experiments were critiqued by Jim Enright, a professor of behavioral physiology at the University of California, who claimed that Betz had applied 'nonstandard statistical methods that were conspicuously fitted to the data', and that when more conventional methods were applied, the effect reported by Betz disappeared. Enright conceded that the experiments 'are not only the most extensive and careful scientific study of the dowsing problem ever attempted', but added that, on that score, 'if reason prevails... they probably also represent the last major study of this sort that will ever be undertaken'.[31]

In a detailed rebuttal, Betz criticized Enright's statistical approach as 'crude, even illegitimate' and 'insensitive'. He claimed a 'sophisticated' re-analysis by a third party 'obtained results which entirely contradict those of Enright, and even outperform our original positive conclusion.[32]

## Parapsychological Research

The possibility that the underlying cause is psychic – a clairvoyant transfer of information in the mind of the dowser – makes dowsing a potential area for parapsychological investigation.[33] This is especially the case for dowsing undertaken at a remote location or that uses a map or other representation, where there is no possibility of picking up information by normal means, for instance from possible clues in the landscape.

Parapsychologists have carried out occasional experiments since the 1950s. In one, a subject was asked to locate a coin placed under one of numerous thick cardboard pieces. In 63 trials the overall result was $p < 10^{-6}$, although sensory cues could not be completely ruled out.[34]

When dowser Bill Lewis was asked to use map dowsing to locate ancient megalithic sites, he was able to locate and describe the sites at a more successful rate than a control subject.[35]

In another experiment a dowser using a pencil to move across a horse race betting form and reacting to a 'pull' towards a particular horse won more than both a novice and a punter using a method.[36]

## Dowsing in Business

Practical successes achieved by dowsers ensures that the activity continues, particularly in business, where results matter more than theories. Water and minerals continue to be the main objects sought. For example in Canada dowsers are used to locate underground water for construction firms[37] and in Britain an engineer at a utility company claims to use dowsing to locate leaks.[38]

Betz investigated and endorsed a German drilling company which had operated successfully for ten years, and which claimed to locate every drill by dowsing techniques with guarantees of success, failing which the client was not required to pay.[39]

Celebrity psychic Uri Geller has claimed a successful career pinpointing drilling sites for businesses, although without using traditional dowsing techniques.

## Societies

British Dowsers

American Society of Dowsers

Australia (NSW) Society of Dowsers

Australia (Victoria) Society of Dowsers

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## Footnotes


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