Mikveh

Mikveh (Hebrew, מִקְוֶה), literally translated as a "collection" or "gathering," is a pool or bath of clear water in which immersion renders ritually clean a person who has become ritually unclean.

Overview

Today the chief use of the *mikveh* is for women, prior to marriage, following *niddut*, and following the birth of a child, since the laws of ritual impurity no longer apply after the destruction of the Temple. *Mikveh* immersion is also obligatory for converts as part of the ceremony of conversion. In addition, immersion in the *mikveh* is still practiced by various groups as an aid to spirituality, particularly on the eve of the Shabbat and festivals, especially Yom Kippur, and the custom still obtains, in accordance with Numbers 31: 22–23 to immerse new vessels and utensils purchased from non-Jews. At the beginning of the 21st century, *mikveh* immersion also frequently constituted a symbolic expression of a new spiritual beginning for both women and men in all branches of Jewish practice. In addition to conversion to Judaism, rituals have developed incorporating *mikveh* immersion as part of bar mitzvah and bat mitzvah; prior to marriage for men as well as women; in cases of miscarriage, infertility, and illness; and following divorce, sexual assault, or other life-altering events. An indication of the probable long-term impact of this trend is the increased construction of *mikva'ot* by non-Orthodox Jewish communities in North America.

It is emphasized that the purpose of immersion is not physical but spiritual cleanliness. Maimonides concludes his codification of the laws of the *mikveh* with the following statement: It is plain that the laws about immersion as a means of freeing oneself from uncleanness are decrees laid down by Scripture and not matters about which human understanding is capable of forming a judgment; for behold, they are included among the divine statutes. Now 'uncleanness' is not mud or filth which water can remove, but is a matter of scriptural decree and dependent on the intention of the heart. Therefore the Sages have said, 'If a man immerses himself, but without special intention, it is as though he has not immersed himself at all.'

Nevertheless, we may find some indication [for the moral basis] of this: Just as one who sets his heart on becoming clean becomes clean as soon as he has immersed himself, although nothing new has befallen his body, so, too, one who sets his heart on cleansing himself from the uncleannesses that beset men's souls – namely, wrongful thoughts and false convictions – becomes clean as soon as he consents in his heart to shun those counsels and brings his soul into the waters of pure reason. Behold, Scriptures say, 'And I will sprinkle clean water upon you, and ye shall be clean; from all your uncleannesses and from all your idols will I cleanse you [Ezek. 36: 25]' (Yad, Mikva'ot 11:12).

Although Maimonides in this passage states that lack of intention invalidates the act under all circumstances, a view which is found in the Tosefta (Ḥag. 3:2), the *halakhah*, as in fact codified by him (Yad, *ibid*. 1:8), is that the need for intention applies only for the purpose of eating holy things, such as *ma'aser and terumah*. For a menstruant, and before eating ordinary food, though intention is desirable in the first instance, its lack does not invalidate the immersion. The importance of intention in the laws of

ritual impurity is further illustrated by the fact that the rabbis permitted fig cakes that had been hidden in water – an action that would normally make the food susceptible to uncleanness – because they had been put there in order to hide them and not to wet them (Makhsh. 1:6). This stress on intention passed from Judaism into Islam. "Purity is the half of faith" is a saying attributed to Muhammad himself, and in general, the laws of uncleanness in Islam bear a striking resemblance to those of Judaism (*Encyclopedia of Islam*, S.V. *Tahara*).

According to biblical law, any collection of water, drawn or otherwise, is suitable for a *mikveh* as long as it contains enough for a person to immerse himself (Yad, *ibid*. 4:1). The rabbis, however, enacted that only water which has not been drawn, i.e., has not been in a vessel or receptacle, may be used; and they further established that the minimum quantity for immersion is that which is contained in a square cubit to the height of three cubits. A *mikveh* containing less than this amount (which they estimated to be a volume of 40 *se'ah*, being between 250–1,000 liters according to various calculations) becomes invalid should three *log* of drawn water fall into it or be added. However, if the *mikveh* contains more than this amount, it can never become invalid no matter how much drawn water is added. These laws are the basis for the various ways of constructing the *mikveh* (see below). To them, a whole Talmudic tractate, *Mikva'ot*, is devoted, and Maimonides assigns them a whole treatise of the same name. The laws can be conveniently divided into two parts, the construction of the *mikveh* itself and the water which renders it valid or invalid.

The *mikveh* is valid, however, built, providing that it has not been prefabricated and brought and installed on the site, since in that case, it constitutes a "vessel" which renders the water in it "drawn water" ("*mayim she'uvim*"; Mik. 4:1). It may be hewn out of the rock or built-in or put on the ground, and any material is suitable. It must be watertight since leakage invalidates it. It must contain a minimum of 40 *se'ah* of valid water, and, although it was originally laid down that its height must be 47 in. (120 cm.) to enable a person standing in it to be completely immersed (Sifra 6:3), even though he has to bend his knees (Sifra 6:3), it was later laid down that providing there is the necessary minimum quantity of water, immersion is valid while lying down.

The Water

All natural spring water, providing it is clean and has not been discolored by any admixtures, is valid for a *mikveh*. With regard to rainwater, which is ideal for a *mikveh*, and melted snow and ice (even if manufactured from "drawn" water), which are also valid, care must be taken to ensure that the water flows freely and is not rendered invalid by the flow into it being stopped, thus turning it into "drawn water." In addition, the water must not reach the *mikveh* through vessels made of metal or other materials that are susceptible to ritual uncleanness. This is avoided by attaching the pipes and other accessories to the ground, by virtue of which they cease to have the status of "vessels." Similarly, the *mikveh* is emptied from above by hand, by vacuum, or by electric or automatic pumps. The emptying through a hole in the bottom is forbidden since the plug may be regarded as a "vessel" as well as giving rise to the possibility of leakage.

There is, however, one regulation with regard to the *mikveh* which considerably eases the problems of assuring a supply of valid water. Once it possesses the minimum quantity of 40 *se'ah* of valid water, even though "someone draws water in a jug and throws it into the *mikveh* all day long, all the water is valid." In

addition, “if there is an upper *mikveh* containing 40 *se’ah* of valid water, and someone puts drawn water in the upper *mikveh*, thus increasing its volume, and 40 *se’ah* of it flows into the lower pool, that lower pool is a valid *mikveh*” (Yad, Mikva’ot 4:6). It is thus possible to exploit limitless quantities of valid water.

Various Forms of Mikveh

The above regulations determine the various kinds of *mikveh* that are in use. In rare cases where there is a plentiful supply of valid water, spring or rain- (or sea-) water which can constantly replenish the *mikveh*, the only desiderata which have to be complied with are to ensure that the water does not become invalidated by the construction of the *mikveh*, rendering it a “vessel” or by going through metal pipes which are not sunk in the ground, as detailed above.

Since, however, *mikva’ot* are usually constructed in urban and other settlements where such supplies are not freely available, the technological and halakhic solution of the valid *mikveh* depends essentially upon constructing a *mikveh* with valid water and replenishing it with invalid water, taking advantage of the fact that the addition of this water to an originally valid one does not invalidate it.

The following are among the systems used:

1. The basic *mikveh* consists of the minimum valid amount of 40 *se’ah* of rainwater. To this rainwater, ordinary water may subsequently be added through a trough that is absorbent, dug in the ground, or one made of lean concrete at least three handbreadths (c. 30 cm.) long and one wide. Through this device, the added water is regarded as coming from the ground and not through a “vessel” The resultant mixture of both types of water passes into the *mikveh* through a hole in the dividing wall. Since the added water is regarded as “seeding” the original valid water, it is called the *oẓar zeri’ah* ("store for seeding").

2. In a second system, the added drawn water is not previously mixed with the rainwater, as in the previous case, but flows directly onto the basic rainwater *mikveh* through an aperture in the wall of the *mikveh*, the diameter of which must be “the size of the spout of a water bottle” (c. 2 in.; 5–6 cm., Mik. 6:7). This method is called *oẓar hasnakah* (“the store produced by contact”). Both the above methods, though they answer the halakhic needs, have their disadvantages in operation and in maintenance, particularly through the exhaustion of the rainwater and the stagnation of the standing water. The other systems are aimed at overcoming these drawbacks.

3. The “*dut*” is a cistern or tank built into the ground to store rainwater. When changing the water in the *mikveh*, it is filled each time with at least 21 *se’ah* of rainwater from the cistern, and water is then added from the “store for seeding” by conduction. The water in the *mikveh* is brought into contact with the “contact store” by the method mentioned above. Though indeed this method overcomes the many shortcomings and halakhic problems, it nevertheless requires an extensive area for the cistern and large areas of roof and pipes for filling with considerable amounts of rainwater in the winter.

4. Both a “store for seeding” and a “contact store” are built on each side of the *mikveh*. Each store has an aperture connecting its water with that of the *mikveh*.

5. A single “store” consisting of both “seeding” and “contacting.”

6. A “store” upon a “store.” A “contact store” is built on two stories joined by an aperture with the diameter of “the spout of a bottle.” The water of the *mikveh* is validated by means of the hole in the party wall between the *mikveh* and the upper “store.”

7. A “contact store” under the floor of the *mikveh*, connected by means of a hole the size of “the spout of a water bottle.”

The *mikva’ot* of Jerusalem as well as the oldest *mikva’ot* in other towns of Eretz Israel, are built in general by the method of the “contact store” as well as by the “store of seeding.” In the new settlements and elsewhere, the *mikva’ot* are built in the main only by the method of the “store of seeding” (a system approved by Rabbi A.I. Karelitz, the “Ḥazon Ish”). Latterly *mikva’ot* have been built by the method of two “stores.”

In recent years vast improvements have been made in the hygienic and other aspects of the *mikveh*. An early enactment, attributed to Ezra, that a woman must wash her hair before immersing herself (BK 82a) may be provided for by the now universal custom of having baths as an adjunct to *mikva’ot*, the use of which is an essential preliminary to entering the *mikveh*, and especially in the United States they are provided with hairdressing salons and even beauty parlors.

The regulations for constructing the *mikveh* are complicated, and its construction requires considerable knowledge of technology combined with strict adherence to the *halakhah*, and it should be built only after consultation with and under the supervision of accepted rabbinic authorities. Nevertheless, in order to increase the use of this essential requirement of traditional Judaism, a book has been published which consists almost entirely of instructions for making a valid “Do it yourself” *mikveh*.

History and Archaeology

During the Second Temple period (roughly from 100 B.C.E. to 70 C.E.), the Jewish population in Palestine had a very distinctive practice of purification within water installations known as *mikva’ot*. Large numbers of stepped-and-plastered *mikva’ot* have been found in excavations in Jerusalem, in outlying villages, as well as at various rural locations. Most of the installations in Jerusalem were in basements of private dwellings and, therefore, must have served the specific domestic needs of the city inhabitants. Numerous examples are known from the area of the “Upper City” of Second Temple period Jerusalem (the present-day Jewish Quarter and Mount Zion), with smaller numbers in the “City of David“ and the “Bezetha Hill.” A few slightly larger *mikva’ot* are known in the immediate area of the Temple Mount, but these installations could not have met the needs of tens of thousands of Jewish pilgrims from outside the city attending the festivities at the Temple on an annual basis. It would appear that the Bethesda and Siloam Pools – to the north and south of the Temple Mount – were designed at the time of Herod the Great to accommodate almost all of the ritual purification needs of the large numbers of Jewish pilgrims who flocked to Jerusalem for the festivals. In addition to this, those precluded from admission to the Temple, owing to disabilities and bodily defects, would have sought miraculous healing at these pools, and this is the background for the healing accounts in the Gospel of John (5: 1–13; 9: 7, 11).

Although water purification is referred to in the Old Testament, in regard to rituals and the Jewish Temple in Jerusalem, with washing, sprinkling, and dipping in water, we do not hear of specific places or

installations that people would constantly frequent for the purpose of ritually cleansing their flesh. The term *mikveh* was used in a very general sense in the Old Testament to refer to a body of water of indeterminate extent (cf. Gen. 1:10; Ex. 7:19) or, more specifically, to waters gathered from a spring or within a cistern (Lev. 11: 36) or waters designated for a large reservoir situated in Jerusalem (Isa. 22: 11). None of these places are mentioned as having been used for ritual purification in any way. Hence, the concept of the *mikveh* as a hewn cave or constructed purification pool attached to one's dwelling or place of work is undoubtedly a later one. A distinction must be made, therefore, between the purification practices as they are represented in biblical sources, with Jewish water immersion rituals of the Second Temple period, as well as with later customs of *mikva'ot* prevailing from medieval times and to the present day (see below).

The basis for our information about what was or was not permitted in regard to *mikva'ot* appears in rabbinic sources: the tractate Mikva'ot in the Mishnah and Tosefta. One must take into consideration, however, that this information might very well be idealized, at least in part, and that the reality of purification practices in Second Temple times may have been much more flexible than one would suppose from these sources. Josephus Flavius is silent in his writings about the purification installations of his time, and the few references in Dead Sea Scroll manuscripts are definitely not to be relied upon to generalize about the common Jewish purification practices current in the Second Temple period Palestine. The Mishnah (Mik. 1:1–8, ed. Danby) indicates that there were at least six grades of *mikva'ot*, listed from the worst to the best: (1) ponds; (2) ponds during the rainy season; (3) immersion pools containing more than 40 *se'ah* of water; (4) wells with natural groundwater; (5) salty water from the sea and hot springs; and (6) natural flowing "living" waters from springs and in rivers. Clearly, the ubiquitous stepped-and-plastered installation known to scholars from archaeological excavations since the 1960s and now commonly referred to as the *mikveh* (referred to under No. 3, above) was not the best or the worst of the six grades of *mikva'ot* as set forth in the Mishnah. It is referred to as follows: "More excellent is a pool of water containing forty *se'ah*; for in them men may immerse themselves and immerse other things [e.g., vessels]" (Mik. 1:7). The validity of *mikva'ot* was apparently one of the subjects occasionally debated in the "Chamber of Hewn Stone" in Jerusalem (Ed. 7:4).

Stringent religious regulations (*halakhot*) are referred to in regard to certain constructional details and how the installations were to be used. A *mikveh* had to be supplied with "pure" water derived from natural sources (rivers, springs, or rain) throughout the year and even during the long dry season, and it had to contain a minimum of 40 *se'ah* of water (the equivalent of less than one cubic meter of water) so that a person might be properly immersed (if not standing, then lying down). Once the natural flow of water into a *mikveh* had been stopped, it became "drawn" water (*mayim she'uvim*). Water could not be added mechanically, but there was a possibility of increasing the volume by allowing drawn water to enter from an adjacent container, according to the sources, so long as the original amount of water did not decrease to below the minimum requirement of water. Hence, an additional body of water, known since medieval times as the *oẓar* (the "treasury"), could be connected to the *mikveh*, and linked by pipe or channel. There was, of course, the problem of the water becoming dirty or stagnant (though not impure), but the *mikveh* was not used for daily ablutions for the purpose of keeping clean. Indeed, people appear to have washed (or parts of their bodies, notably the feet and hands) before entering the ritual bath (Mik.

9:2). Basins for cleansing feet and legs have been found in front of the *mikva'ot* of Herodian dwellings in Jerusalem.

The *mikveh* was required, according to the rabbinical sources, to be sunk into the ground, either through construction or by the process of hewing into the rock, and into it natural water would flow derived from a spring or from surface rainwater in the winter seasons. There was, of course, the problem of silting (Mik. 2:6). The phenomenon of silts gathering within a *mikveh* was referred to quite clearly in rabbinic texts. For instance, in reference to the minimum quantity of water required in a *mikveh* for it to be ritually permissible, we hear that: "if the mud was scraped up [from the pool and heaped] by the sides, and three *logs* [a measure] of water drained down therein, it remains valid [for cleansing purposes]; but if the mud was removed away [from the pool] and three *logs* rained down therefrom [into the pool] it becomes invalid" (Mik. 2:6). Elsewhere, we are told about certain damming operations made inside the *mikveh*: "if the water of an immersion pool was too shallow it may be dammed [to one side] even with bundles of sticks or reeds, that the level of water may be raised, and so he may go down and immerse himself " (Mik. 7:7).

The walls and floors of the *mikveh* chambers were plastered (frequently made of slaked quicklime mixed with numerous charcoal inclusions); ceilings were either natural rock or barrel-vaulted with masonry. These installations are distinguished by flights of steps leading down into them and extending across the entire breadth of the chamber; such ubiquitous steps, however, were not referred to in the sources. The riser of the lowest step tended to be deeper than the rest of the steps, presumably to facilitate the immersion procedures when the level of water had dropped to a minimum. Some of these steps had a low raised (and plastered) partition which is thought to have separated the descending impure person (on the right) from the pure person leaving the *mikveh* (on the left). Similarly, there were *mikva'ot* with double entrances and these may indicate that the activities carried out inside them resembled those undertaken in installations with the partitioned steps. This arrangement of steps and/or double entrances is known mainly from Jerusalem, but also from sites in the vicinity, as well in the Hebron Hills and at Qumran. The installations from Jerusalem and the Hebron Hills with the single partitions fit well the double lane theory that it was constructed to facilitate the separation of the impure from the pure, but at Qumran, installations were found with three or more of these partitions, which is odd. According to one suggestion (Regev), maintaining the utmost in purity *inside* the *mikveh*, reflected by the addition of features such as the partitions, would have been a concern mainly for priests, but little support for this hypothesis has been forthcoming from the archaeological evidence itself. Indeed, Galor rightly points out that the partitions are, at best symbolic rather than functional and that in some of the installations at Qumran, they were not even practical, providing in one installation a stepped lane which was only 6 in. (15 cm.) wide!

The *mikveh* was also used for the purifying of contaminated vessels (e.g. Mik. 2:9–10, 5:6, 6:1, 10:1; cf. Mark 7:4). It is not surprising, therefore, that in the excavation of *mikva'ot* at Jericho and Jerusalem, some were found to contain quantities of ceramic vessels. Alternatively, it is quite possible that such *mikva'ot* were intended specifically for the purpose of cleaning vessels and were never used for the immersion of people. At Jericho, in one *mikveh*, located in the northern sector of the main Hasmonean palace, hundreds of intact ceramic vessels (mainly bowls) of the first century B.C.E. were found in a silt layer on the floor of one installation. It is quite possible that these vessels were abandoned at one stage

of the cleansing process because there was too much silt inside the installation, a phenomenon referred to in the Mishnah (see Mik. 2:10). A large concentration of pottery was also found trapped beneath a collapse of ashlars in the lower part of a *mikveh*, dating to the first century B.C.E., which was uncovered in the Jewish Quarter excavations in the Old City of Jerusalem. The concentration of pottery found there mainly consisted of an unspecified number of small bowls, mostly intact.

The date of the first appearance of stepped-and-plastered *mikva'ot* is a matter still debated by scholars, but the general consensus of opinion is that this occurred in the Late Hellenistic (Hasmonean) period, at some point during the end of the second century B.C.E. or very early in the first century B.C.E. One thing is certain: only a handful of *mikva'ot* are known from the time of the Hasmoneans, whereas by contrast large numbers of *mikva'ot* are known dating from the time of Herod the Great (late first century B.C.E.) and up to the destruction of Jerusalem (70 C.E.). This, therefore, led Berlin to conclude that the appearance of *mikva'ot* cannot predate the mid-first century B.C.E., but there is sufficient evidence at Jerusalem, Jericho, Gezer, and elsewhere to support an earlier date than that. What there can be no doubt about is that the *floruit* in the use of *mikva'ot* was in the first century C.E.

To sum up what we know about the use of the household *mikveh* in the first century based on the rabbinic texts and archaeological finds: the average size of the *mikveh* suggests that ritual bathing was ordinarily practiced individually (no more than one person would enter the installation at a time) and the location of *mikva'ot* within the basements of private dwellings suggests this purification was done regularly and whenever deemed necessary. The purpose of the immersion was to ritually cleanse the flesh of the contaminated person in pure water, but it may also have been undertaken within households before eating or as an aid to spirituality, before reading the Torah or praying. It was neither used for the cleansing of the soul nor for the redemption of sins or any other rituals (except for the conversion of proselytes following their acceptance of the Torah and circumcision; Pes. 8:8). One assumes that disrobing took place before the immersion and that new garments were put on immediately afterward. Ritual bathing could be conducted in the comfort of a person's dwelling, but there were also more public *mikva'ot,* such as those used by peasants and other workers (such as quarrymen, potters, and lime burners) who would cleanse themselves at various locations in the landscape. A few *mikva'ot* are known in the immediate vicinity of tombs, but they are quite rare, indicating that ritual purification following entrance into tombs was not common. The *mikveh* was not used for general cleaning and ablution purposes: this was done in alternative installations located within the house or in public bathhouses instead.

The fact that so many *mikva'ot* are known from greater Jerusalem, from within the city itself as well as from the villages and farms in its hinterland, is a very clear reflection of the preoccupation Jerusalemites had in the first century with the concept of separating and fixing the boundary between the pure and the impure. A general concern about purity was common to all Jews at that time, especially in the city that contained the House of G-d – the Jewish Temple. There are definitely no grounds for linking the phenomenon of *mikva'ot* in Jerusalem to any one specific group within Judaism, as some have done. In the eyes of the inhabitants of the city, a clear separation would have been made between the use of *natural* and *built* places for purification. While rabbinical sources may have extolled the higher sanctity of immersing in natural sources of water, the ease with which immersion could be made in a specifically designed installation situated in the basement of a house made it far more convenient than having to set forth into the countryside in search of a natural source of water in which one might seek to purify oneself.

Natural sources of water were either situated at a distance from the city (e.g., the Jordan River), were difficult to access (e.g., a spring used for irrigation for agriculture), or were only available at the right season in the year (e.g., pools in rocky depressions that filled up after the winter rains). Above all, it would appear that convenience counted as the most important consideration when a *mikveh* came to be built in the first century. A stepped-and-plastered installation in the basement of a house satisfied all those who wished to immerse themselves on a regular basis for purification. To that end, the installation had to have had a satisfactory incoming source of pure water, and in most instances rainwater sufficed. Everything else was done for reasons of fashion and personal preference, and one should include such things as footbaths outside the *mikveh*, double entrances, and lane partitions on the steps. The idea that the construction of *mikva'ot* was done in strict accordance and adherence to religious rules and stipulations (such as those debated in the "Chamber of Hewn Stone"; Ed. 7:4) is highly unlikely and finds no support in the archaeological evidence itself. Hence, the information about *mikva'ot* as it appears in the tractates of the Mishna and Tosefta should probably be regarded as representing a certain degree of rabbinical idealism rather than the complete reality of empirical practice of *mikveh* construction that was supposedly passed down through the generations following the destruction of Jerusalem in 70 C.E.

The important and obvious conclusion, however, is that the rise in the popularity of this installation during the first century C.E. no doubt reflects changing attitudes that were coming to the fore in regard to the perception of everyday purity and possible sources of ritual contamination. In a way, we may regard the later rabbinical writings on the subject of *mikva'ot* as the reflected culmination of a heightened process of Jewish awareness regarding purity that began to intensify, particularly in the mid-first century C.E. An unprecedented number of *mikva'ot* ultimately came to be built, sometimes with more than one or two installations per household, and not just in the city of Jerusalem but in the outlying villages and farms as well. This development may also be paralleled with the sudden upsurge seen in the manufacturing of stone vessels in the mid-first century C.E. (from c. 50 C.E. or perhaps 60) onwards. Such vessels were perceived as being able to maintain purity and, as such, were extremely popular in the "household Judaism" assemblage of that time (see Berlin 2005), with small mugs and large (*kalal*) jars serving a particularly useful task during hand-washing purification procedures. Perhaps we should regard *mikva'ot* and stone vessels as two sides of the same coin representing the overall "explosion" of purity that took place within Judaism in the first century C.E. ("purity broke out among the Jews"; Tosef. Shab. 1:14), stemming from changing religious sensibilities on the one hand and perhaps serving on the other as a form of passive Jewish resistance against encroaching features of Roman culture in the critical decade or so preceding the Great Revolt.

The Mikveh in Medieval and Modern Times

From Israel, the *halakhot* of the *mikveh* and its construction spread to Europe, first and foremost to Italy. Eleazar b. Yose taught a *halakhah* on the topic of cleanness in Rome, and his colleagues agreed with it (Tosef., Nid. 7:1). The close connection between Italy and Germany through the medium of the scholars of Alsace and the communities of Spires, Worms, and Mainz brought the spread of the *halakhot* of Eretz Israel and their *mikva'ot* were built according to the traditional format. In the Middle Ages the *mikveh* constituted civically an integral part of the Jewish center and synagogue, not merely in Byzantine Israel (Huldah, Maon-Nirim, etc.) but also in Italy, Germany, Bohemia, Lithuania, Poland, and other places. The most ancient remnants of *mikva'ot* in Germany have been uncovered in Cologne from

1170, Spires 1200, Friedberg 1260, Offburg 1351, and in Andernach, too, in the 14th century. The most typical is in Worms – a subterranean building with 19 steps descending to the entrance hall and then another 11 steps to the *mikveh* itself. A similar *mikveh* exists in Cairo and in the vault of the Tiferet Israel synagogue in Jerusalem. In Europe, the architectural lines were influenced by the environment and by the builders, who were generally not Jews (who had no entry to the trade guilds). The architectural and other details of their construction are remarkable by their precision – the outer and inner ornamentation, the capitals of the pillars, beautiful inscriptions, etc.; a mixture of Oriental and European elements created architectural solutions for the special problems of building the *mikveh*. In place of Roman modes, the Gothic and Baroque styles left their mark on the outer and inner styles.

In many instances, the *mikva'ot* of the Middle Ages served as bathhouses because of the order forbidding Jews to wash in the rivers together with Christians.

The views of the halakhic authorities in all generations differed with reference to many details of the *mikveh*. From this stemmed the great difference in the ways of building and in the systems of installation. Modern technology demands solutions to many problems, such as the permissibility of the use of reinforced concrete, porous concrete for the trough of validation, and floor tiles to prevent the leaking of water. In every generation, the authorities of each generation have delved deeply into the sources of the *halakhah* and its reasons, and from them, have come to clear decisions for the planner and builder, leaving extensive scope for his imagination and his ability to coordinate *halakhah* with technology.