

Water is universal

to gravity. And this actually does occur at first. But after a very short time the thread of water changes its course: it starts to swing rhythmically to the right and left, producing a meandering trail of water that changes constantly. Rivulets, streams and rivers form these meanders, leave loops behind and reshape their banks. Entire landscapes are shaped in this way.

Different structures like pools, channels or vessels offer themselves for experiment. Flexible, changeable materials like clay or sand are particularly suitable for studies of this kind. If you wish to determine the inner movements of a body of water, you need to add fine particles or dye. To make surface currents visible you should add lycopodium (club-moss spores), and for three-dimensional movement in water the addition of magnesium dust or a dye like potassium permanganate is recommended. The closer the dye is to the same specific gravity as the liquid, the more clearly the movement can be seen, even when flowing slowly.

The water workshop: working with real models

It is sensible and advantageous when working out designs with water to work with it in a real form as well. Experience has taught us this: fountain projects, flow details or flow channels that are really interesting and appropriate to water cannot be developed and calculated theoretically, they need experiment, frequently on the scale of one to one.

We are constantly discovering that water is our best teacher. Despite all prior considerations and even with a great deal of experience: water does not always behave as expected. Corrections and constant new experiments are the principal task. The designs improve gradually and start to carry the signature of the water itself.

A water workshop can be simple and robust. In any case it should be well enough equipped to allow a large number of the desired experiments with water to be carried out. It is astonishing how directly and surely water itself holds the mirror up for the designer. In practice we are constantly surprised how immediately convincing ideas can be acquired in this way.

Linking themes

This is particularly true today: themes involving water are complex and are always directly related to other themes and specialist areas. Isolated water-features that are self-sufficient are no longer in vogue and on close consideration historical fountain complexes always existed in a context of many other functions. They provided drinking and utility water, were a sound instrument for the town, especially at night, and they formed a social focal point where people could meet.

Water themes today: the need for links. Water influences our sense of well-being in towns and in buildings, it affects the humidity, the temperature, the cleanness of the air, the climate. Water can be used in such a way that it filters, cools or warms the outside air and regulates humidity. Experience in the Prisma in Nuremberg or in the Nikolaus-Cusanus-Haus show new ways forward for air-conditioning.

Smell and taste make places unmistakable. It is one of the strongest impressions available if you recognize a town, a location, a season through its smell, and here too water can mediate. The somewhat sickly smell of the haze on a late summer's morning in Venice or the fragrance of blossom by the Seine in Paris in the spring.

The sounds of water against street noise. They are soothing, and compensate for urban stress, never mind the decibel levels. Robert Woodward opened his Opera Café near a busy highway, but surrounded it with a cascade of water, so that you can enjoy your cappuccino in the middle of it, undisturbed and in the best of spirits. And in downtown San Francisco you can escape from the noise of the city and lie down and relax on a lawn by the waterfalls of the Martin Luther King memorial fountain. But even unspectacular small water features can make spaces magical with their special sounds. In the foyer of L'Aubier, a Swiss mountain hotel, a stream of water activates a musical fountain. Water is the artist, the fountain is the musical instrument.

Moving light brings spaces to life. Water distorts, refracts and reflects. It distributes incident light dynamically in connection with its own movement. Working purposefully with light effects and thus using the water surface as an instrument is demonstrated by the examples of urban water in Potsdamer Platz in Berlin, by the finely differentiated waves and water-courses in Gummersbach or the major water scene in Hannover-Münden. Here the art is to move the water in such a way that it supports the light installation.

Water at the wrong time and in the wrong place causes extra-high tides, floods, erosion and destruction, but also droughts, a lack of groundwater, dried-up aquifers and biotopes, and thus the destruction and elimination of a rich variety of flora and fauna. Water projects have to address creating a balance in water management. Retention, purification, evaporation and infiltration must of course be integral elements in a municipal water programme. Rain retention in the Kronsberg district of Hanover, the green roof to retain and purify rainwater on City Hall in Chicago and the use, storage and integration of water in the new Potsdamer Platz development in central Berlin all count towards this.

And finally, water creates atmosphere, something that is vital to our towns and cities if they are to be individual,