

TWENTY BUILDINGS
every architect should understand

Simon Unwin

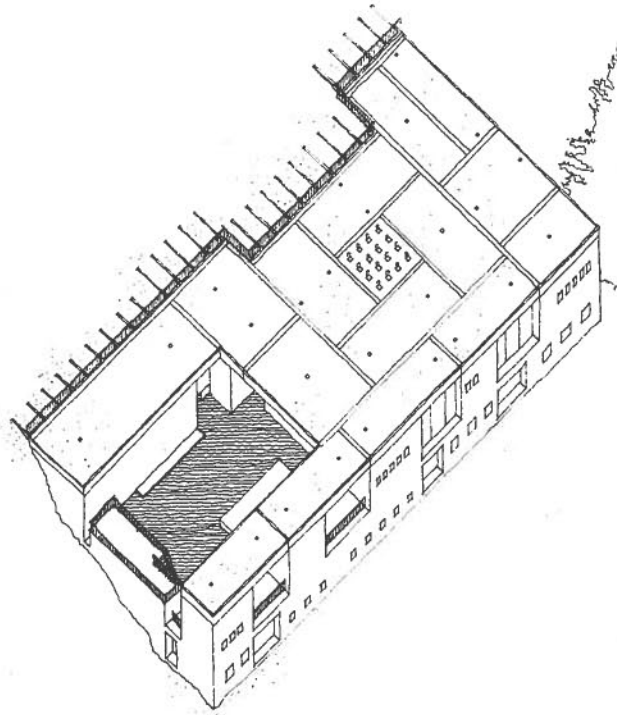
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THERMAL BATHS, VALS

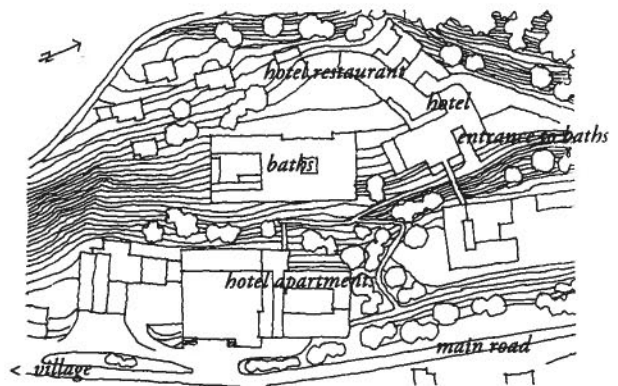
A bathing complex attached to a hotel in a Swiss valley

PETER ZUMTHOR, 1996

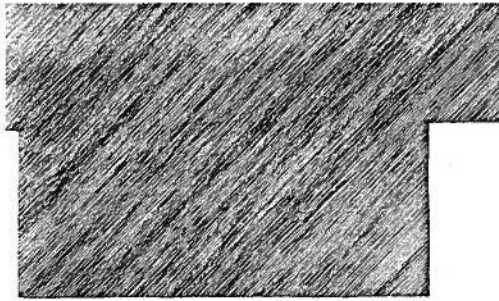


Architecture is often conceived in terms of addition but it may be generated by subtraction too. A wall is built by adding bricks onto bricks, a house by adding room to room. But space can be won by excavation, by taking away material from solid matter. Caves, for example, are made by running water wearing away rock. Troglodyte houses are made by people cutting away at soft rock – maybe expanding natural caves – to make rooms. So architecture may be made by taking away as well as adding. Peter Zumthor's thermal baths at Vals are not excavated from natural rock but they are conceived as if they were.

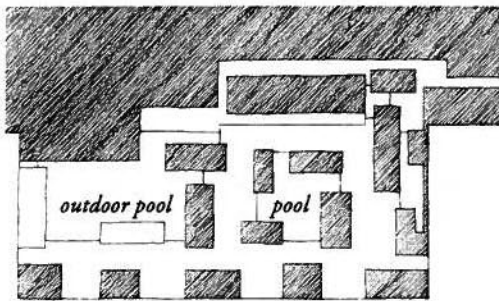
The thermal baths at Vals are attached to an older hotel built in the 1960s. They emerge out of the steep hillside on which the



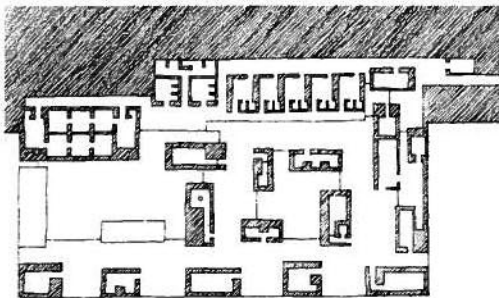
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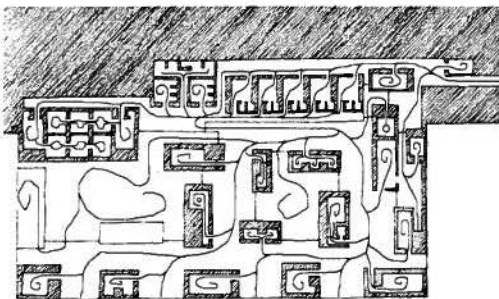
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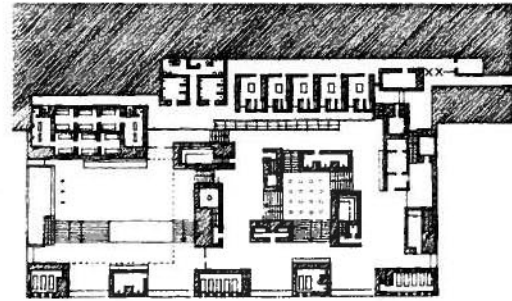
2



3



4



5

hotel stands, near the village of Vals beside the river that flows along the floor of a deep valley between the high Alps in the Graubünden canton of eastern Switzerland. The hotel and baths face east across the valley. In the early morning shafts of sunlight strike high across the valley, between the peaks opposite. At midday and in the afternoon the short clipped grass of the opposite hillsides, bathed in sunlight, is bright green. In winter the landscape is grey and white. On cool days vapours from the baths' warm outdoor pool join the mists in the valley.

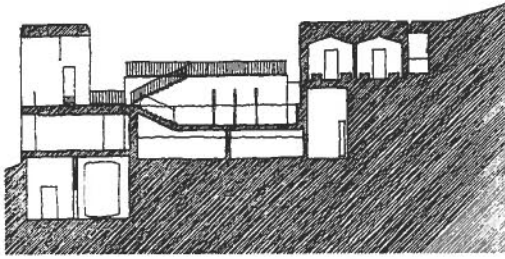
Excavated space

The baths exploit water from a natural hot spring. You enter the building down a tunnel under the hotel, as if you too were a molecule in a flow of water, come to join the waters that are there already.

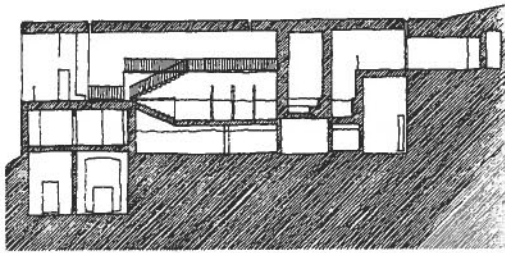
The baths building is a massive rectangular block bedded half into the slope (1). Though conceptually monolithic, this block is built of thin slices of locally quarried quartzite stone. Its perfect geometry emerges straight from the grass of the hillside and is capped by a perfectly horizontal concrete slab. Grass grows on the top.

The architecture begins with this geometrically perfect piece of geology. The spaces that accommodate the baths are scoured from within this block, not by water but by Zumthor's designing mind (2). This is an artificial cave system made not by mindless processes but, like one of George MacDonald's fairy tales, obeying the laws imposed by its own fantastic imagination.

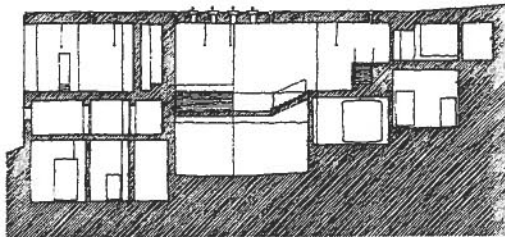
The mind as instrument of erosion enters, as do bathers in the finished building, through the tunnel at the top right of the plan. It finds its way through crevices in the rock gradually making them wider, but always obeying the authority of its own orthogonal geometry. Spaces that are tight and small near the source become



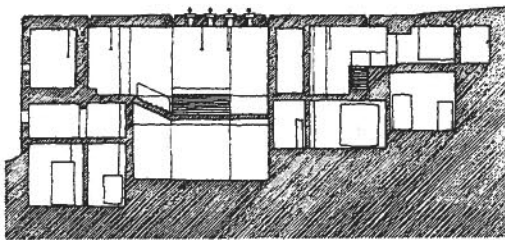
6 a-a'



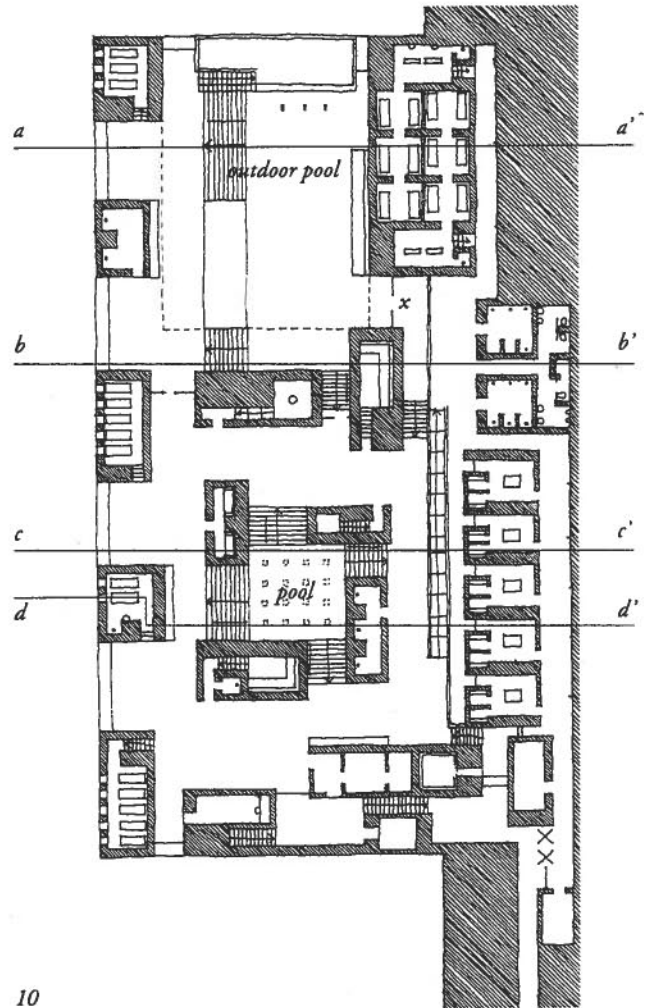
7 b-b'



8 c-c'



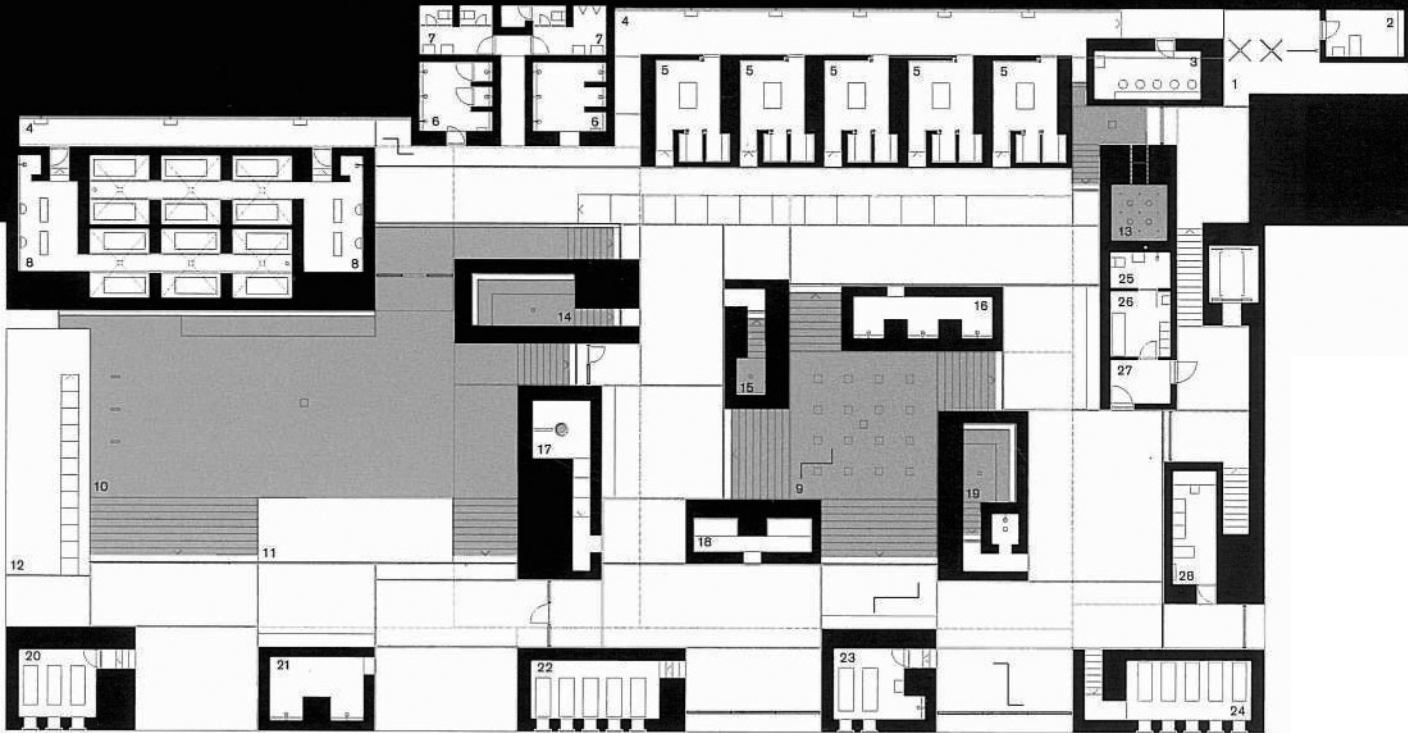
9 d-d'



10

wider and more generous towards the opposite corner – as they do in natural cave systems. Water collects in depressions in the floor. Light enters through the 'cave's' mouths, and through cracks in the 'rock' ceiling. Great pillars of rock left by the scouring are themselves excavated, making small secret places inside (3). Bathers pass through the five changing rooms to wander and swim amongst the pillars and seek out the secret places to soak and relax (4).

The sections (6-9) show how the spaces flow down and open out from the north to the east and south. The concrete slab roof is



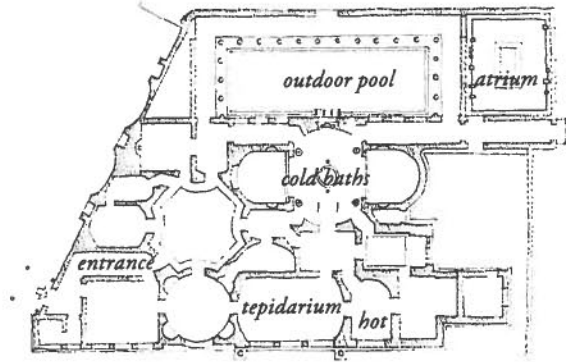
cut away over the outdoor pool (at the top of the plan above, 10). Around it are platforms for sunbathing. The outdoor pool extends under an overhang and inside. You can swim through a doorway at (1, x) between inside and outside.

Ideal geometry

Of course, the laws Zumthor's fantastic imagination follows are those of ideal geometry. Like the geometry of a sophisticated piece of music, that of the thermal baths in Vals is complex and many layered. It is too complex and has too many layers to give a complete account here. As in other buildings analysed in this book, it appears to be based on the square, the $\sqrt{2}$ rectangle and the Golden Section rectangle (1). The only obvious square is that of the indoor pool with its four by four square of sixteen small roof lights. This centres two slightly larger squares of different dimensions. One of these gives the outer extents of two of the great pillars containing the secret

places: (a) high powerful showers that crash on your back; and (b) a dark and quiet room for meditation lying on a bed listening to simple music made by striking rocks. The extent of a Golden Section rectangle generated from this square coincides with the outer edge of the building. The other slightly larger square determines the outer extents of the another two of the great pillars, containing: (c) a freezing cold pool; and (d) a pool of warm water covered with perfumed flower petals. (There is a shower to wash off the petals when you get out.) A $\sqrt{2}$ rectangle derived from this square determines the position of the inner face of the great pillar containing the fountain from which you can taste the spa water (e).

The whole building is based on a large square and Golden Section rectangle, but with a bit added to the northern end to accommodate the stairs down to a lower floor which is chiefly for the plant and maintenance areas. The extent of this added bit seems to have been determined by another Golden Section rectangle. The area of roof cut out over the outdoor pool is a $\sqrt{2}$ rectangle attached



2 a reconstruction of the women's baths at Tivoli, near Rome

to the southern side of the large square on which the large Golden Section rectangle is based. And so on. The matrix of ideal geometry on which this building is based is too intricate to describe in words or even as a diagram. The thermal baths at Vals is a cave system made by a mathematician.

Modifying elements

Other great pillars contain secret places for different experiences. There is very hot bath in (f) and two sets of steam baths in (b) and (i). Maybe these were intended for male and female but they are used for those who wear their swimming costumes and those who do not. At (g) is a small but lofty rock chamber that you reach by going through a tunnel in the water. This is the chamber where you find people humming, making the sounds from their vocal chords resonate with the acoustic of the space.

The focus on sensual experience in the thermal baths at Vals is reminiscent of that in the bathing complexes built by the ancient Romans (2). Roman baths had pools of different temperatures: hot, tepid and cold. They might also have an outdoor pool. In his baths, Zumthor adds further sensual experiences: the perfumed pool with flower petals; the chamber where people hum; the small chamber where you can drink the spa water; the chamber where you can lie in the dark and listen to rock music; the chambers where giant showers crash water onto your back, and so on. This is a building that provides for all the five senses – sight, touch, hearing, smell and taste – but it provides for other senses too. Zumthor said there should be no clocks in the baths so that bathers would be unaware of time. But the building does not obliterate time; it replaces clock

time with other sorts of time: the movement of the sun and clouds across the sky; the movement of other bodies around the internal spaces; the movement of land workers and animals on the hillside opposite; your own explorations of the secret places in the great pillars. It is a building that caters for other senses too: the sense of slight trepidation each time you cross the threshold into one of the secret places; the sense of self-consciousness when you emerge from the changing rooms at the higher level in front of the other people in the pool; or, alternatively, the gratified sense of exhibition if you enjoy showing off your body to others.

Conclusion: content and context

There are sixteen small roof lights over the indoor pool at Vals. For each, on the grassy roof, there is a small light, lit at night; the shade of each light is black and like a narcissus flower; it looks down into the pool chamber below and at its own reflection in the glass of its roof light. Narcissus was the god who fell in love with his own image reflected in a pond. His story is told by the Roman poet Ovid in his *Metamorphoses*.

Though the building is much photographed, the thermal baths at Vals is more powerful as an instrument that manipulates the person's experience than as a visual object. It is a building that mediates between people and the surroundings – landscape and climate. It provides a frame within which people indulge privately in sensual pleasures, a refuge from which they may watch the landscape and changing weather, and a stage on which they may display themselves. Through history these have been some of the fundamental purposes of architecture. Zumthor's building is itself less narcissistic and

more one that shows consideration for its context and content. It is interested in what it does as well as how it looks. In providing for the people who use it and in responding to the setting the building makes a bridge between the two. The entrance tunnel cuts visitors off from the surrounding landscape only to reintroduce them in the special circumstances of being unclothed in a labyrinth carved from inside a huge artificial and geometrically ordered rock boulder. If the thermal baths at Vals is a 'temple', it is a temple to the sensual human being.

References and other relevant publications, websites, broadcasts:

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