COMPRESSION VS. EXPANSION

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The lintel of a door is usually 2.10 m high, and we all pass under it, including Pau Gasol. But if we make Pau Gasol pass his 2.13 m height under a ceiling 2.10 m high but with a wide floor plan, for example 3x3 m, he will do it with difficulty, and will have to duck his head. And he will physically feel the phenomenon of spatial compression, the one that Le Corbusier set at 2.26 m for his lowest ceilings.

A wide plane of such a low height, 2.10, always produces a clear spatial compression in the human body, which is greater for taller people. When this occurs in a small space, as in a bathroom, the sensation is less pronounced.

At the stone fair in Verona in 2013, I designed a pavilion for the Italian stone company Pibamarmi. It consisted of a large 4x4x1 m *travertine nocciola stone* suspended in the air, 1.90 m above the ground, inside an 8x8x4 m light cube on a mirrored floor. Visitors had to pass under the huge stone, and over the mirror, to cross that space. And there, under that great stone, one could feel, as if it were Sisyphus himself, spatial compression, gravity as an attribute of physics, or as an inescapable property of architecture. Everything spoke of the weight of gravity and spatial compression. Of course, in this case, the mirror on the floor produced astonishing effects.

The compressed space in architecture is the one in which the human body has that strong feeling of compression, after an appropriate combination of reduced dimension vertically and wide horizontally. What we call spatial compression. Very simple to understand.

But if, on the other hand, the ceiling of a room is 7 m high, what architects call double height, the spatial sensation will be very different. We speak then of a spatial dilation, of a vertically dilated space. The so-called main floor in the bourgeois housing of the nineteenth and twentieth century used to have that greater height, often that so-called double height. And of course in the palaces.

And if we combine both spaces, one compressed with one dilated, one of single height with one of double height, so that to enter the higher one you have to pass through the lower one, the effect, by contrast, is of great spatial efficiency. It is the well-known mechanism of the compression-dilation of space that has been used so many times in architecture.