

This is no ordinary hotel where bedrooms branch off corridors! This place has no ordinary views. In fact, here every single step you take will be extraordinary. Experiencing low gravity will make you question every simple move you make. Amaze yourself with your superman-like abilities, wonder about the strange slow way water falls, pour in a drink, lean back and enjoy the amazing lunar landscapes. Watch Earth in the ink black sky... Orbiting in a whole new world brings with it a whole new set of limitations and inherent possibilities. Although we are not always aware of it, when designing a building we trust our subconscious understanding of gravity and physics. We operate from archetypes for ceiling heights, staircase dimensions etcetera etc., without even noticing that we do so. Every concept, as well as each calculation and assumption needs to be re-evaluated. One of the biggest challenges of designing a hotel on the moon was to face this necessity to discard this 'terrestrial' frame of reference.

FRAME OF REFERENCE

Designers generally have a thorough knowledge of historical and cultural conventions, as well as a feeling for architectural schools and movements. By designing a new building we position ourselves somewhere on these axis, either intended or unintended. This frame of reference is virtually useless when designing for lunar conditions. Could science fiction design perhaps offer an alternative frame of reference?

FICTION VERSUS REALITY

There's always been a strong link between science fiction and 'science reality' or scientific research. Just as science fiction incorporates findings from scientific studies, scientists challenge themselves to expand their human imagination by pondering over the possibilities of 'theories' from the world of science fiction. To prevent using elements of science fiction in a casual manner, I examined some science fiction films trying to see how filmmakers designed these worlds. With the same intention I created a science reality database that prevented me from using reality elements as casualness.

FEASIBILITY

From the moment Tito was launched into space, space tourism shifted from science fiction to fact. No doubt Tito's trip will have its successors. This contemporary technology is sufficient to take people to the moon. Serious entrepreneurs already have their business plans ready to commercially exploit space tourism. *It's just a matter of time. And of guts...*

PSYCHOLOGICAL BEACON

This is a harsh environment. The lack of atmosphere, deadly radiation and extreme temperatures pose

serious threats to visitors. The concept of a beacon counter-balances these inhospitable conditions. As a lighthouse marks a safe place in a stormy sea, tower like structures offer a focusing point and a haven. From the top of the tall towers, visitors get an optimal view into the vast lunar landscapes surrounding them. The image of Earth in the sky makes them aware of their link with Earth, and at the same time the immense distance separating them from home.

Lower gravity implies that your muscles deteriorate quickly if you don't exercise properly. Vertical structures offer excellent exercise by means of stair climbing. When approaching the hotel, the image of Earth is captured between the two towers. Duplicating the structure gives you the opportunity to get a view across 'to the other side'. Hotel guests are considered 'travellers' instead of 'visitors' and are invited to travel up and down the structures, from one tower to the other and exchanging the safety of the hotel for the thrill of the viewing platform outside the high end of both towers. Compartmentalising is vital to assure the safety of visitors and personnel. For that reason, part of the structure is situated beneath the surface. The staff resides in the subterranean section, where exposure to radiation is virtually nil. In case of emergency in one of the towers, people can be evacuated to the other tower, which has sufficient facilities to function autonomously. Although they appear to be similar from the outside, the tower programs differ significantly. One tower has a physically, and the other one a spiritually orientated programme.

Lower gravity and the absence of wind pressure allow the design of an alienating building and its spaces. The dimensioning of the building as a whole, as well as its constructive elements (beams, levers, columns, ceiling height and staircases) could not be achieved on Earth. Moreover, the lack of cross-branching structures would cause the building to tip over in earthly circumstances. These constructions make you question the archetypes of space and design. Lunar days and nights last as long as 14 days on Earth. One month suffices to experience one entire day and night. The lack of sunlight during the long lunar nights should be compensated for.

Lunar conditions differ so drastically from conditions on Earth that, when designing lunar spaces, we cannot possibly trust our most basic construction knowledge. Generations of computers were developed by technical engineers. It took designers as well as engineers a few decades to realise that this item could improve significantly by seriously taking design aspects into account. Will there be generations of lunar (and space) dwellings before the discipline of architecture becomes involved? Can architecture contribute to the cross-disciplinary efforts to conquer space? ■

