Monday, May 21, 2007

Illusion of the Leaning Tower of Pisa

The above novel issue of "The Leaning Tower" by Frederick Kingdom, Ali Yoonessi and Elena Gheorghiu won the Neural Correlate Society's Best Visual Illusion of the Year(2007) Contest. How does it work?

The two images of the Leaning Tower of Pisa are identical, yet one has the impression that the tower on the right leans more, as if photographed from a different angle. The reason for this is because the visual system treats the two images as if part of a single scene. Normally, if two adjacent towers rise at the same angle, their image outlines converge as they recede from view due to perspective, and this is taken into account by the visual system. So when confronted with two towers whose corresponding outlines are parallel, the visual system assumes they must be diverging as they rise from view, and this is what we see. The illusion is not restricted to towers photographed from below, but works well with other scenes, such as railway tracks receding into the distance. What this illusion reveals is less to do with perspective, but how the visual system tends to treat two side-by-side images as if part of the same scene. However hard we try to think of the two photographs of the Leaning Tower as separate, albeit identical images of the same object, our visual system regards them as the 'Twin Towers of Pisa', whose perspective can only be interpreted in terms of one tower leaning more than the other.

The top 10 finalists are [here](http://indyankk.blogspot.com/2007/05/illusion-of-leaning-tower-of-pisa.html)

Posted by Indyank at 2:28 AM

Labels: illusion