

PSYC305-08A  
**Applied Cognition & Neuroscience**  
*Mātai hinengaro whaipāinga*

**Illusions in the real world (Lect. 19)**

Topics:

© Assoc Prof. John Perrone  
 Psychology Dept.  
 The University of Waikato

1. Outdoor illusions (overview)
2. Visit to Academy of Performing arts

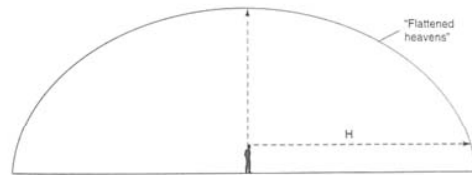
Figures from:  
 Levine & Shefner, *Fundamentals of Sensation & Perception*  
 Kaufman & Rock, *Perception: Mechanisms and Models*  
 H. Ross, *Behaviour and Perception in Strange Environments*

**'Outdoor' Illusions**  
 (Illusions in the real world)

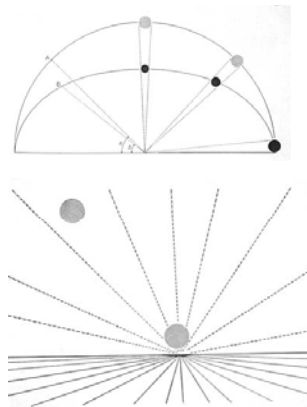
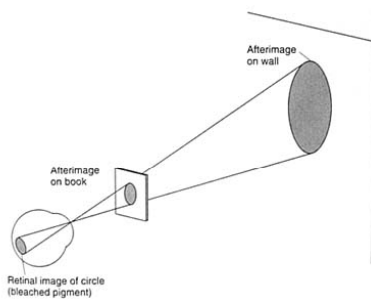
The moon illusion



The moon on the horizon appears larger than the moon at the zenith (i.e., higher elevations).



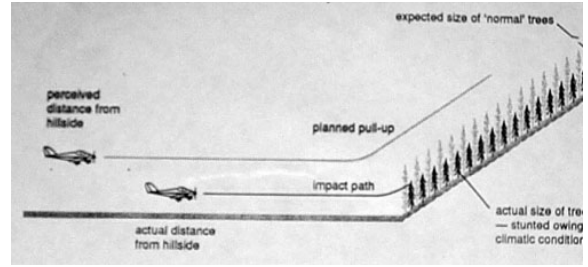
The 'flattened heavens' explanation for the moon illusion. Distance to the 'top' of the sky appears less than the distance to the horizon. If it appears further away at the horizon it must appear larger (see next slide).



Figures from Kaufman and Rock showing flattened dome and the impact of a nearer perceived distance on the perceived size of the moon.



Most hills are perceived as being steeper than they really are.



Size/distance illusions in the real world



Apparently uphill but truly downhill view



Apparently downhill but truly uphill view

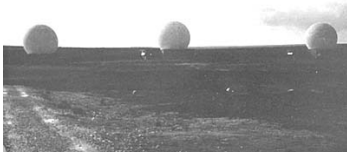
Roads in Scotland (From Helen Ross book).



-Raised horizon and sloping water.  
-Raised apparent height of surrounding mountains.

Photo by P. Clark (Helen Ross book).

Size/distance perception in strange environments



How big are these spheres?



Underwater perception of size and distance (research by Helen Ross)



Experiment on perceived vertical while underwater.

An orientation illusion on campus



The Performing Arts Centre, University of Waikato