

Assignment 2

1. A bunch of kittens were reared from birth by seeing only vertical stripes. They were in an enclosed area with just stripes all around them. They wore neck ruffs so that they cannot turn their heads to see the vertical stripes in a different orientation. After this, they were compared with normal kittens. What difference would you expect in the sensitivity of these kittens from the normal kittens? Why? Which area of the brain is responsible for this difference and how?

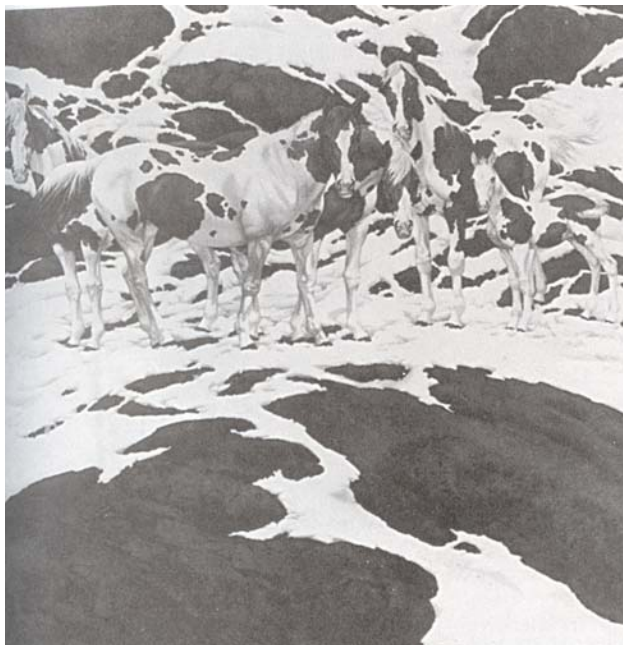


2. An experiment was conducted on the LGN of two sets of monkey. In one set, the parvocellular cells were numbed by surgery. On the other set, the magnocellular cells were numbed by surgery. What do you expect is the effect of these two operations on the two sets of monkeys?
3. You are designing a modeling package for web artists. You were told that you should design the geometric primitives in such a way that the objects created should have continuous curvature. What kind of continuity should you assure in the designing process?
4. Image mosaicing software advices you to have enough overlap between adjacent images in the panorama. Why?

Turn Over



5. The left picture is a simple line drawing of a face while the right image is a low resolution picture. The right hand side image has a lot more information, yet we perceive the face of the man with the line drawing much better. What does it say about our visual system? What are the different areas and cells in the visual system that the left image would stimulate?



6. In the left hand side image, you can easily separate the horse from their background. According to Palmer-Irvin which particular doctrine of perceptual segregation helps you to do this figure-ground separation?