

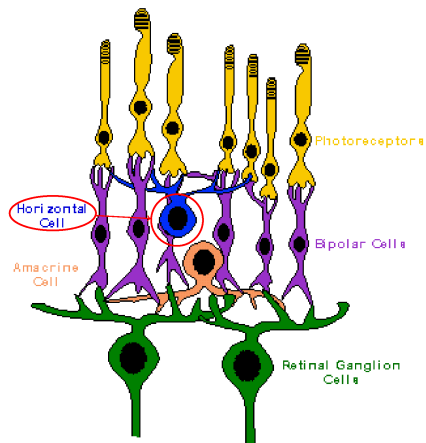
Biological Vision and Applications

Module 02-02: Lateral Inhibition

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The Horizontal cells and Lateral Inhibition



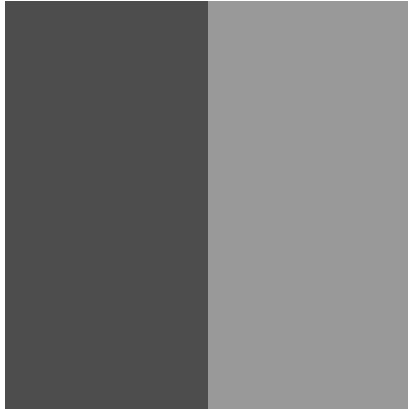
- Connects nearby photoreceptors of the same kind
 - ▶ Rods or Cones of same type
- Carries a Lateral Inhibition signal
 - ▶ From a photoreceptor to it's neighbors
 - ▶ \propto response level of the photoreceptor

Machband Effect



Machband Effect

... contd



Machband Effect

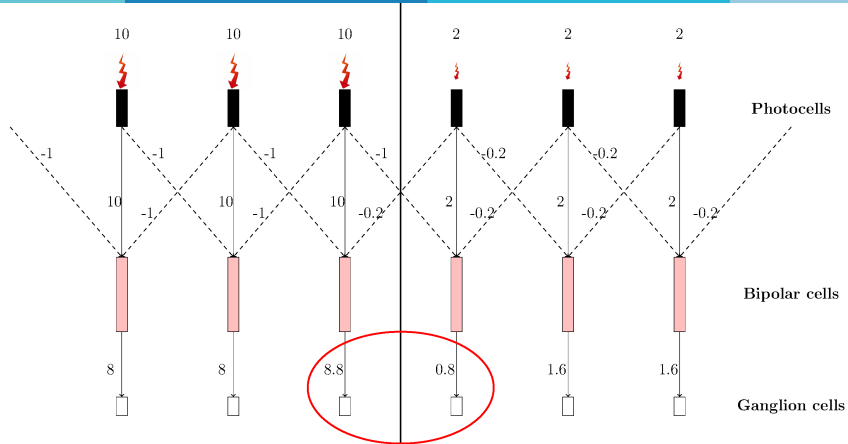
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Explanation

- The bars are of uniform colors
- Color next to a darker color appears lighter, and vice-versa
- Adds contrast to vision
- Happens because of the LI signal from the adjacent photoreceptor cells

Computational Model



- Assumes $\frac{1}{10}$ th of response to be transmitted as inhibition signal to neighbors

Quiz 02-02

End of Module 02-02