

A.L. Hodgkin and A.F. Huxley
J. Physiol. 117:500, 1952
(Nobel Prize in Physiology
and Medicine, 1963)

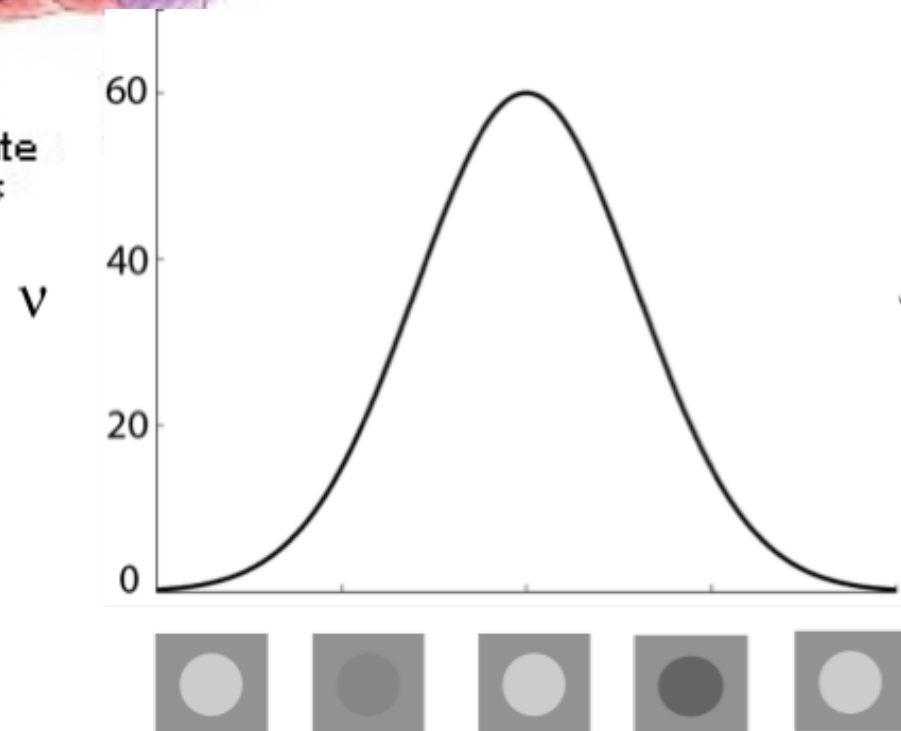
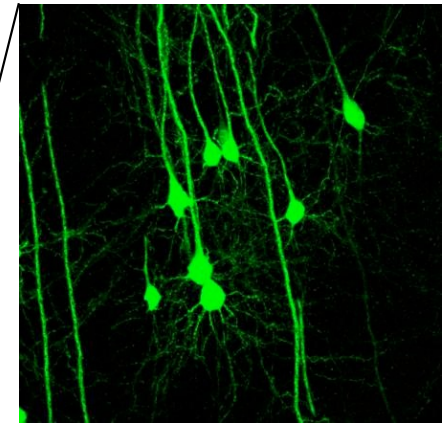
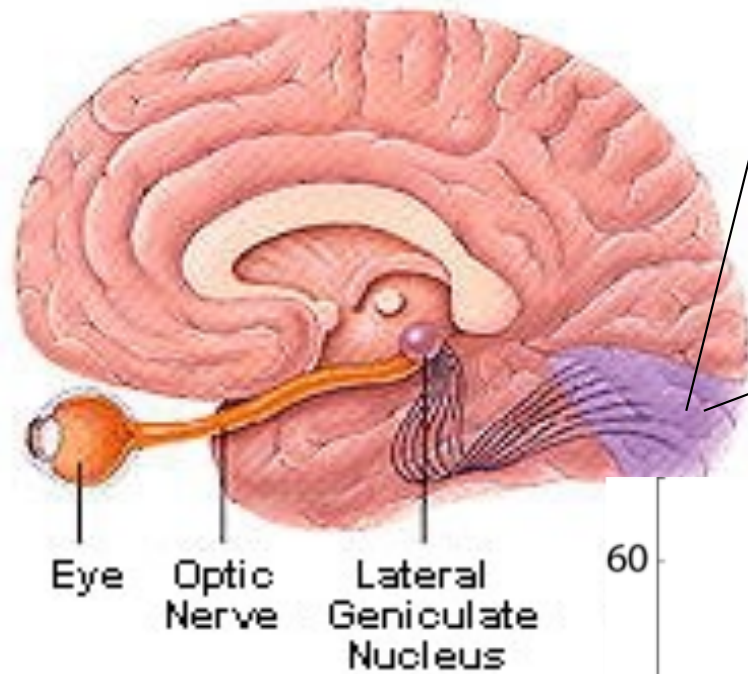
Given spikes ... Where's the information?



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1. Averaged spike statistics

Cortical encoding via spiking rates

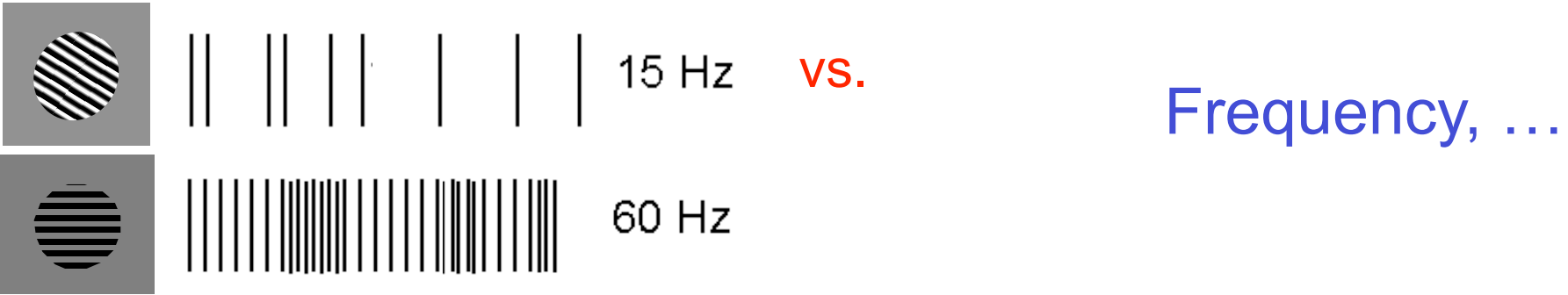


Hubel and Weisel. *J. Physiol.*, 1962

Reddy, Kreiman, Koch, and Fried (2005)

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1. Averaged spike statistics



Given spikes ... Where's the information?

1. Averaged spike statistics



Frequency, ...



2. Precise spike timing



Spike times $\{t_j\}$



Given spikes ... Where's the information?

1. Averaged spike statistics



Frequency, ...



2. Precise spike timing



Spike times $\{t_j\}$



Biology: BOTH.

Metrics: Fisher Information, Mutual Information ...