

The Dynamics of Human Visual Experiences

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Presentation Abstract Summary Natural image statistics have been important in theories of vision processing. Previous work characterizing the statistics of image patches showed that oriented lines and edges are common in images (Lee, Pedersen, & Mumford, 2003; Carlsson, 2009). However, less is known about the regularities of natural videos. Here, we extend previous methods developed for images to video. We find that the statistical properties of natural video exhibit characteristics similar to images, by analyzing spatial, temporal, and spatio-temporal information in video. Specifically, we find that temporal and spatio-temporal patches are both more concentrated on the state space than spatial patches and that they capture different visual statistics of movement over time.

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