



DEPARTMENT OF  
PSYCHOLOGY  
*Illinois State University*

## The Department of Psychology & CBS Colloquium Series

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# On form and function: Investigating temporal distributions of behavior in infancy

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Much of human learning consists of extracting and exploiting the statistical regularities in the learning environment. It is therefore important to characterize and better understand the form and function of these statistical regularities. A growing body of work is showing that many human behaviors can be characterized by short bursts of activity followed by long lulls of inactivity. Despite the growing list of phenomena characterized as so-called bursty temporal structure, little is known about the consequences of these statistical regularities for cognition. Moreover, and pertinent to the present talk, even less is known about how a developing infant perceives, acts, and learns, in an environment with these known temporal properties.

In the present talk, I will report on two studies my colleagues and I have conducted to investigate the form and function of temporal distributions of behavior in infancy. In the first study, we will dig into the question of what these temporal distributions might mean for learning. I will show that when parents' speech streams are classified as bursty, instead of periodic or random, infants learn the names of objects at higher rates. In the second study, using a large corpus of ego-centric scenes collected from infants in naturalistic settings, I will show that the temporal structure of early visual experiences is characterized by short bursts of visual occurrences followed by long periods of time without these visual occurrences. These results will be discussed in terms of specific properties of memory and learning processes that are likely embedded in bursty temporal distributions.



**Friday,  
Sept. 28, 2018  
2:00 p.m.  
48 DeGarmo Hall**

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If you need a special accommodation to participate in this program, please contact the Psychology Department at (309) 438-8651. Please allow sufficient time to arrange the accommodation.