Experimental project on number and plurality - exploring the dialectic between theory and empirical data

In my talk, I will use examples from my experimental work with Julien Musolino (Professor, Department of Psychology and Center for Cognitive Science, Rutgers University) and Jasmine Teng (student at Rutgers University) to examine the roles of methodological principles, theoretical insights, and empirical data in the development of our understanding of semantic phenomena involving relational sentences with numerals and plurals (‘Three boys are holding two balloons’, ‘The boys are holding the balloons’). First, I will illustrate the productive dialectic between theory and experimental work. I will show how theory can benefit from close attention to empirical data: how experimental work helps resolve theoretical controversies surrounding the so-called cumulative readings for plural relational sentences. I will also illustrate how a better understanding of experimental results is achieved by theoretical insights: how bringing in the concept of domain restriction sheds new light on our empirical results. I will conclude the talk with a brief discussion of the confrontation of methodological principles of simplicity (semantic version of Occam's Razor of not multiplying meanings beyond necessity, the principle that simple solutions should be favored over more complex ones) with the empirical reality of multiply ambiguous plural relational sentences.