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**Allison J Dorko\*** ([allison.j.dorko@okstate.edu](mailto:allison.j.dorko@okstate.edu)), 676 Waterville Road, Skowhegan, ME 04976. *Assimilation, Accommodation, and Graphing in R3.*

The ability to construct a graph in  $R^3$  is important for student success in many multivariable topics, but many students struggle to create correct  $R^3$  graphs. In this talk, I will discuss students' strategies for visualising some basic  $R^3$  graphs. I will frame the talk with Piagetian learning theory. Specifically, I will argue that characterising students' graphing strategies in terms of assimilation and accommodation provides an explanatory mechanism for students' difficulty visualising  $R^3$  graphs. I will conclude with instructional suggestions for helping students create correct graphs. (Received August 23, 2017)